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FINAL FIVE YEAR REVIEW FOR BASE REALIGNMENT AND CLOSURE SITES (PUBLIC
DOCUMENT) NAS FORT WORTH TX
9/1/2005
HYDROGEOLOGIC



CARSWELL AFB TEXAS

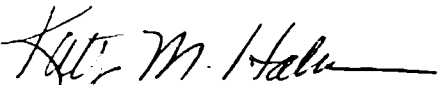
ADMINISTRATIVE RECORD COVER SHEET

AR File Number 742

**FINAL
FIVE-YEAR REVIEW SUMMARY REPORT
FOR BASE REALIGNMENT AND CLOSURE SITES
AT THE
FORMER CARSWELL AIR FORCE BASE,
FORT WORTH, TEXAS**

September 2005

Approved by:



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REPORT DOCUMENTATION PAGE			Form Approved	
			QMB No. 0704-0188	
Public reporting for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1024, Arlington, VA 22202-1302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE September 2005		3. REPORT TYPE AND DATES COVERED Final
4. TITLE AND SUBTITLE Five-Year Review Summary Report for Base Realignment and Closure Sites at Former Carswell Air Force Base, Fort Worth, Texas			4. FUNDING NUMBERS F41624-03-D-8602 Task Order No. 0011	
6. AUTHOR(S) HydroGeoLogic, Inc				
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9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(S) AFCEE/BCW 3300 Sidney Brooks Brooks City-Base, Texas 78235-5112			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Unlimited			12b. DISTRIBUTION CODE	
3. ABSTRACT (Maximum 200 words) This document presents the five-year review of the closure activities and remedial actions implemented at the eight Base Realignment and Closure (BRAC) sites at the former Carswell Air Force Base (AFB) in Fort Worth, Texas. The primary objective of this five-year review was to determine whether the corrective actions/remedies for the eight sites continue to provide adequate protection to human health and the environment.				
14. SUBJECT TERMS			15. NUMBER OF PAGES	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT	

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LIST OF ACRONYMS/ABBREVIATIONS

ACC	Air Combat Command
AFB	Air Force Base
AFBCA	Air Force Base Conversion Agency
AFCEE	Air Force Center for Environmental Excellence
AFMC	Air Force Mobility Command
AFP	Air Force Plant
AFRES	Air Force Reserves
AFRPA	Air Force Real Property Agency
AOC	area of concern
ASC	Aeronautical Systems Center
BRAC	Base Realignment and Closure
Carswell	former Carswell AFB
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	contaminants of concern
DERP	Defense Environmental Restoration Program
EBS	environmental baseline survey
EPA	U.S. Environmental Protection Agency
ERA	Environmental Restoration Account
ERD	Environmental Restoration Division
ER	Environmental Restoration
HGL	HydroGeoLogic, Inc.
IC	institutional control
JRB	Joint Reserve Base
LUC	land use control
MAJCOM	Major Command
MOU	Memorandum of Understanding
MSC	medium specific concentration
NAS	Naval Air Station
NCP	National Contingency Plan
NFA	no further action
NOAEL	no observed adverse effects levels

LIST OF ACRONYMS/ABBREVIATIONS (continued)

NPL	National Priorities List
PCB	polychlorinated biphenyl
RAB	Restoration Advisory Board
RAO	remedial action objective
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RRS	Risk Reduction Standard
SAC	Strategic Air Command
SARA	Superfund Amendments and Reauthorization Act
SWMU	solid waste management unit
TCE	trichloroethene
TCEQ	Texas Commission on Environmental Quality
UST	underground storage tank
UU/UE	unlimited use or unrestricted exposure
VSI	visual site inspection
WSA	Former Off Base Weapons Storage Area

EXECUTIVE SUMMARY

A five-year review was conducted at eight Base Realignment and Closure (BRAC) sites at the Former Carswell Air Force Base (AFB) in Fort Worth, Texas. An environmental baseline survey (EBS) completed in 1994 identified a total of 87 sites requiring investigation. These 87 sites are listed on the Resource Conservation and Recovery Act (RCRA) Hazardous Waste Permit number HW-50289. Nineteen sites are identified as BRAC sites and 68 sites are identified as Environmental Restoration Account (ERA) sites.

Of the 19 BRAC sites, ten were closed under the Texas Commission on Environmental Quality (TCEQ) Risk Reduction Standard (RRS) 1 (no release), one is currently undergoing closure, and eight were closed under RRS 2 (closure/remediation to health-based standards and criteria). Additionally, investigations are ongoing at two areas within the former off base weapons storage area (WSA) including a preliminary assessment and site investigation for residual radioactive contaminated waste materials generated during the maintenance of certain weapons systems that may have been buried within the WSA and ordnance removal and clearance associated with an explosives ordnance disposal area located at the WSA. This five year review assessed whether the corrective remedy (deed certification) for the eight sites closed under RRS 2 (explained below) continues to provide adequate protection to human health and the environment. The eight sites are referred to as Solid Waste Management Units (SWMUs) 22, 23, 24, 25, 59, 60, 65 and Area of Concern (AOC) 5.

Sites closed under RRS 2 have contaminated media that remain in place; however, these contaminated media do not pose a significant threat to human health or the environment. Based upon the review performed, the deed certification remedies selected for these eight BRAC sites remain protective of human health and the environment and are functioning as intended. No information has become available indicating inadequate protection of human or ecological populations. Exposure pathways, land use, toxicity data, and cleanup criteria (e.g. TCEQ RRS 2 values, alternate concentrations limits) either remain unchanged or changes have not affected the protectiveness of the remedy.

It is recommended that annual visual site inspections (VSIs) be conducted to ensure that the remedies continue to be protective. Five-year review updates will continue to be submitted within the required five-year timeframe.

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FINAL
FIVE-YEAR REVIEW SUMMARY REPORT FOR
BASE REALIGNMENT AND CLOSURE SITES AT THE
FORMER CARSWELL AIR FORCE BASE, FORT WORTH, TEXAS

1.0 INTRODUCTION

The primary objective of this five-year review was to determine whether the corrective actions/remedies for sites at the former Carswell Air Force Base (AFB) in Fort Worth, Texas, continue to provide adequate protection to human health and the environment. In addition, this report identifies technical issues of concern, if any, and provides recommendations to address them.

Many site-specific corrective actions/remedies at the former Carswell AFB have been completed under the Resource Conservation and Recovery Act (RCRA) paradigm (see the RCRA hazardous waste Permit No. HW-50289 issued by Texas Commission on Environmental Quality [TCEQ] included as Appendix A). According to the U.S. Environmental Protection Agency (EPA) guidance (Comprehensive Five-Year Review Guidance, June, 2001), a five-year review is not required at sites addressed under RCRA authority. The guidance specifically states "If a site is deferred to RCRA prior to being placed on the National Priorities List (NPL).....you do not need to conduct a five-year review." Regardless, the Air Force understands its obligations under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Defense Environmental Restoration Program (DERP), as established under Section 211 of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and Executive Order 12580. This understanding is addressed in the 2001 Decision Document (Air Force Base Conversion Agency [AFBCA], 2001). The Air Force declared its intent to conduct a statutory review within five years after initiation of the response action for the sites where the remedies resulted in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure (UU/UE). In summary, this five-year review was specifically tailored to complement and make use of RCRA reporting requirements and to address those CERCLA requirements pertaining to five-year remedy review consistent with CERCLA §121 and the National Contingency Plan [NCP] as described below.

CERCLA §121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such a review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The NCP, in 40 Code of Federal Regulations (CFR) §300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

This review was performed under contract F41624-03-D-8602 Delivery Order 11 to the Air Force Real Property Agency (AFRPA) through the Air Force Center for Environmental Excellence (AFCEE). HydroGeoLogic, Inc. (HGL) has conducted this initial five-year review of the closure activities and remedial actions implemented at the eight Base Realignment and Closure (BRAC) sites at the former Carswell AFB in Fort Worth, Texas (Figure 1.1). One site, the Sanitary Sewer System (SWMU 66) is currently undergoing site closure under Texas RRS 2. Additionally, investigations are ongoing at two areas located within the former WSA. A preliminary assessment and site investigation for residual radioactive contaminated waste materials generated during the maintenance of certain weapons systems that may have been buried within the WSA is being conducted. As a result of a geophysical survey of the explosives ordnance disposal area conducted in 2004, an ordnance removal and clearance action will be conducted in the Spring 2006. Assessment of the closure activities and remedial actions taken at SWMU 66 and the WSA and will be added to the next five-year review. This is the first five-year review for the former Carswell AFB. Subsequent reviews will be conducted every five years.

Five-year reviews will not be conducted when the Air Force determines that no hazardous substances, pollutants, or contaminants remain on site above levels that allow for UU/UE (i.e., when cleanup goals have been attained and land use controls (LUC) are not required to protect human health and the environment). Consequently, 10 BRAC sites at the former Carswell AFB were not carried through the review process because closure was obtained under the TCEQ's Risk Reduction Standard No. 1 (RRS 1) as listed in Table 1.1 below. Closure under RRS 1 applies when it has been established that a site has not been affected by past or present waste disposal practices. Closure under RRS 1 allows for unlimited/unrestricted use. In future five-year reviews these 10 sites will not be listed. The remaining eight BRAC sites are the subject of this five-year review.

Table 1.1
BRAC Sites Closed Under TCEQ RRS 1

SITE	STATUS	DATE
SWMU 1	NFA	3/2/95
SWMU 2	NFA	3/2/95
SWMU 3	NFA	3/2/95
SWMU 4	NFA	3/2/95
SWMU 18	NFA	3/2/95
SWMU 58	NFA	8/31/99
AOC 8	NFA	2/4/02
AOC 9	NFA	8/31/99
AOC 14	NFA	12/99
AOC 16*	NFA	6/23/99

NFA = No further action.

AOC = Area of Concern

SWMU = Solid Waste Management Unit

* AOC 16 was closed under TCEQ RRS 1 in 1999; however, soil contamination, most likely emanating from an unknown pipeline source (and not AOC 16), has recently been discovered. In 1997 reports of the petroleum contamination were documented around this area due to a release from an underground petroleum pipeline. The source of the contamination has been investigated by the Air Force and was determined to be from an offsite source. No further remediation is necessary by the Air Force.

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Figure 1.1
Locations of
Solid Waste Management Units
and Areas of Concern at the
Former Carswell Air Force Base
Fort Worth, Texas

Legend

- NAS Fort Worth JRB (Carswell Field)
- Former Carswell Air Force Base
- Air Force Plant 4 Boundary
- Permeable Reactive Barrier
- Solid Waste Management Unit
- Area of Concern
- ▨ BRAC Solid Waste Management Unit

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2.0 BACKGROUND

The former Carswell AFB consists of approximately 2,587 acres located in North Central Texas in Tarrant County, 6 miles northwest of Fort Worth. The communities of White Settlement, Lake Worth Village, Westworth Village, River Oaks, and Samson Park Village lie within a three mile radius of the former Carswell AFB. The base is located downgradient (east-southeast) from Air Force Plant (AFP) 4. Before initial base construction in 1941, the area consisted of woods and pasture in an area called White Settlement.

The former Carswell AFB, which is now known as Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB), began as a dirt runway built to service the aircraft manufacturing plant, AFP 4. In August 1942, the base was opened as Tarrant Field Airdrome and was used to train pilots to fly the B-24 under the jurisdiction of the Gulf Coast Army Air Field Training Command. In May 1943, the field was redesignated as Fort Worth Army Air Field with continued use as a training facility for pilots. The Strategic Air Command (SAC) took over the Fort Worth Army Air Field in 1946, and the base served as the headquarters for the 8th Air Force.

In 1948, the base was renamed Carswell AFB, and the 7th Bomber Wing became the base host unit. The Headquarters 19th Air Division was located at Carswell AFB in 1951, where it remained until September 1988 (A.T. Kearney, 1989). The SAC remained at Carswell AFB until 1992, when the Air Combat Command (ACC) assumed control of the base upon disestablishment of the SAC. Carswell AFB was formally closed on September 30, 1993, pursuant to the Defense Base Closure and Realignment Act of 1990 and recommendations of the Defense Base Closure and Realignment Commission.

In October 1994, the U.S. Navy assumed responsibility for much of the facility after the Defense Base Closure and Realignment Commission recommended alignment as a JRB. Approximately 1,716 acres were realigned and the installation is currently designated as NAS Fort Worth JRB. Even though the Navy has assumed control of the property, under the Memorandum of Understanding (MOU) between the Navy and the Air Force, the Air Force is required to complete remediation of known contaminated sites on this property. Since realignment, the principal activities on the base have been training, mobilization, and deployment of military personnel.

2.1 HISTORY OF CONTAMINATION

Although groundwater beneath the Former Carswell AFB has been impacted by historical activities at AFP 4 (a National Priorities List [NPL] site), groundwater contamination is addressed under the AFP 4 Record of Decision and is not covered under this BRAC five-year review. Environmental studies at the former Carswell AFB began in 1984. The prominent site types included fire training areas, vehicle maintenance areas, hazardous waste drum storage areas, landfills, waste burial areas, fuel hydrant system, contaminated ditches, oil-water separators, fuel storage areas, and underground storage tanks (UST). An environmental baseline survey (EBS) completed in 1994 identified a total of 87 sites (Figure 1.1). The primary contaminants identified by the EBS were petroleum hydrocarbons and volatile organic compounds.

CERCLA Five-Year Review Summary Report for 19 Sites—Former Carswell AFB, Fort Worth, Texas

An MOU outlining environmental cleanup responsibilities, coordination, and action among the Navy, AFRPA, AFCEE, Air Force Mobility Command (AFMC)/Aeronautical Systems Center (ASC), Air Force Reserves (AFRES), and Texas National Guard was signed in June 1993. Per the MOU, the AFCEE/Environmental Restoration Division (ERD) is the Major Command (MAJCOM) for investigation and remediation of active sites on NAS Fort Worth JRB property. It was agreed that the AFRPA would continue to manage the cleanup of sites outside NAS Fort Worth JRB, or the BRAC sites. As a result of the AFRPA and AFCEE/Environmental Restoration (ER) meeting, 19 sites were identified as BRAC sites and 68 sites were identified as ERA sites.

To date, the 87 sites identified in the EBS have undergone or completed RCRA facility investigations (RFIs), remedial actions, and closures. Of the 19 BRAC sites, 18 sites have received closure with NFA. SWMU 66, the Sanitary Sewer System, is currently undergoing closure under RRS 2. The site is not included in this five-year review but will be added to the five-year review during the next cycle. Of the 68 ERA sites, 64 have received closure approval. This five-year review covers the eight BRAC sites closed under RRS 2.

Additionally, investigations are ongoing at two areas within the former WSA. A preliminary assessment and site investigation for residual radioactive contaminated waste materials generated during the maintenance of certain weapons systems that may have been buried within the WSA is being conducted. As a result of a geophysical survey of the explosives ordnance disposal area conducted in 2004, an ordnance removal and clearance action will be conducted in the Spring 2006. These areas are not included in this five year review but will be added, as necessary, to the five year review during the next cycle.

The Air Force will perform all necessary remedial actions on the property until site closure is achieved.

3.0 FIVE-YEAR REVIEW PROCESS

3.1 REMEDIAL ASSESSMENT AND FIVE-YEAR REVIEW FINDINGS

This five-year review has been streamlined to address the elements identified in EPA's five-year review guidance in the most efficient manner and to integrate RCRA and CERCLA requirements into one assessment. The Air Force conducted this five-year review of eight BRAC sites with closure under TCEQ RRS 2. Although corrective action has been conducted in accordance with the RCRA Corrective Action Permit issued to Carswell AFB, this five-year review report addresses the specific components of a CERCLA five-year review, including the community involvement and notification, document and data review and analysis, site inspection, and a protectiveness determination for each site as described below.

3.2 COMMUNITY INVOLVEMENT AND NOTIFICATION

The Carswell Restoration Advisory Board (RAB) has been identified as the ideal mechanism for initiating and maintaining community involvement during the evaluation of protectiveness (as part of the five-year review). The RAB was notified of the five-year review at the February 12, 2004 RAB meeting and a public notice was published in the Fort Worth Star Telegram on February 27, 2004 in order to inform the public of the on-going review status. The results of the five-year review will be included as an agenda item at future RAB meetings. This report detailing the findings for sites with industrial risk-based closures (SWMUs 22, 23, 24, 25, 59, 60, 65 and area of concern [AOC] 5) will be made available to the public via the Administrative Record. Over the past three years, no RAB members have voiced specific concerns regarding any of the BRAC sites covered under this five-year review.

3.3 DOCUMENT AND DATA REVIEW AND ANALYSIS

A review of the most recent technical documents was performed for the applicable sites in the five-year review. The following reports/documents were used for this assessment:

- Closure Document for Grounds Maintenance Yard (AOC 5) Site ID OT-39, NAS JRB Fort Worth, Texas (Jacobs, 1997)
- Draft RCRA Facilities Investigation, Sanitary Sewer System, NAS Fort Worth JRB, Carswell Field, Texas (IT, 1997)
- Final RCRA Facility Investigation of the Offsite Weapons Storage Area at Naval Air Station Fort Worth JRB, Carswell Field, Texas (The Environmental Company, 1999)
- Final RCRA Facility Investigations, SWMUs 22, 23, 24, and 25, NAS Fort Worth JRB, Texas (HGL, 2001)
- Final Closure Report for the Offsite Weapons Storage Area at Naval Air Station Fort Worth Joint Reserve Base, Texas (The Environmental Company, 2001)

- Decision Document, 12 Installation Restoration Program Sites. Carswell Air Force Base (AFBCA, 2001)
- Groundwater Sampling and Analysis Plan Reports (Earth Tech, Inc., 2002; HGL, 1998, 1999, 2000, and 2001; Ellis Environmental, LC, 2002)
- Letter Report Former Carswell AFB, Property Transfer Site Investigation (Shaw Environmental, Inc., 2003)
- Final Completion Report, Remedial Actions at Landfills LF-04, LF-05, LF-08, and Waste Burial Area (WP-07), NAS Fort Worth JRB (Former Carswell AFB), Fort Worth, Texas (IT, 2001)

For detailed information regarding site history and remedy selection, refer to the above documents.

Sites closed under TCEQ RRS 2 (closure/remediation to health-based standards and criteria) have contaminated media that remain in place; however, these contaminated media do not pose a significant threat to human health or the environment. For each site closed under RRS 2, a comparison of the RRS 2 values used at the time the site was closed was made to the RRS 2 values available on the TCEQ's website in February 2004. Additionally, inorganic data were screened against basewide background values. This comparison was made to determine if any of the RRS 2 values changed since the sites were closed. In cases when an RRS 2 value changed, the highest detection for each compound detected at the site was re-screened against the new RRS 2 value to determine if the highest detection of each analyte was greater than the new RRS 2 value. If the highest detection exceeded the current RRS 2 value, then a potential level of risk not protective of human health or the environment may exist. A complete listing of these comparisons is presented in Appendix B. Additionally, site documentation for each of these sites is presented in Appendix C.

A different review approach was required for the Offsite Weapons Storage Area (WSA) sites since they were closed under RRS 2 residential standards using a human health and ecological risk assessment. Pathways and receptors were evaluated to determine protectiveness. To evaluate the clean-up level calculations, the current RRS 2 and medium specific concentrations (MSC) were used to identify chemicals for which the clean-up levels may have changed. For those sites addressed in accordance with *Risk-Based Corrective Action for Leaking Storage Tank Sites* (RG-36, TNRCC, 1994), the clean-up levels were obtained from Plan B Target Concentrations. The toxicity factors used in the development of these concentrations were compared to current values. For the original ecological evaluation, the maximum detected concentrations were screened against soil benchmarks for plants and soil benchmarks for invertebrates. In addition, chemical intakes for upper trophic level receptors were calculated and compared to no observed adverse effects levels (NOAELs). The screening benchmarks and NOAELs used in the original evaluation were compared to current values recommended by the TCEQ in their Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas (TCEQ, 2001).

Although groundwater is not an issue attributed to any of the BRAC sites, existing groundwater sampling data collected for voluntary actions at the site as well as for the AFP 4 Record of Decision were reviewed to confirm that the BRAC sites do not appear to be a source of contamination to groundwater. While these data were not collected for the individual SWMUs or AOCs, some of the sampled monitoring wells are located in the vicinity of the five-year review sites. Therefore, a qualitative review of groundwater data from associated monitoring wells was performed using the data from 1997 to the present from the various groundwater sampling reports. There were no increasing trends noted in the concentrations of contaminants downgradient of each of the BRAC sites covered in this five-year review.

3.4 INTERVIEWS

Because there are no on-going remedial actions other than IC/LUCs at the sites, no interviews were necessary for this five-year review.

3.5 SITE INSPECTIONS

On June 8, 2005, site inspections were conducted by Air Force contractors for this five-year review effort at each of the 8 sites closed under RRS 2. The purpose of each site inspection was to ensure that any restrictions placed on the sites were currently being followed and to assess the protectiveness of the remedy, including the presence of fencing (or other institutional control [IC]) to restrict access, and the integrity of landfill caps. The inspections did not reveal any deficiencies for the remedies in place. No activities were observed that violate the ICs. The landfill caps and surrounding areas were undisturbed, and no new uses of groundwater were observed. A summary of the Site Inspections is included in Appendix D.

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4.0 TECHNICAL ASSESSMENT

4.1 PROTECTIVENESS DETERMINATION FOR EACH SITE

The protectiveness determination was conducted for sites with final closure under TCEQ RRS 2. EPA's guidance on assessing protectiveness is extensive and was followed during this review and report summary. Essentially, EPA recommends answering the following three questions when assessing the protectiveness of a remedy:

- Is the remedy functioning as intended by the decision document?
- Are the exposure assumptions, toxicity data, and remedial action objectives (RAOs) that were used at the time of remedy selection still valid?
- Does any new information raise questions about the protectiveness of the remedy?

The following sections provide answers to these protectiveness-related questions on a site-specific basis. The eight remaining BRAC sites listed in Table 4.1 have been closed under RRS 2 per TCEQ regulations. The following section outlines post-closure care requirements required by the State of Texas for RRS 2 closures.

Table 4.1
BRAC Sites Closed Under TCEQ RRS 2

Site	Remedy In Place	Is Remedy Functioning as Intended?	Are Exposure Assumptions, Toxicity Data, and RAOs Used at Remedy Selection Still Valid? ²	Does Any New Information Raise Questions About the Protectiveness of the Remedy?
SWMU 22 (Landfill 4)	Deed Certification	Yes	Yes	No
SWMU 23 (Landfill 5)	Deed Certification	Yes	Yes	No
SWMU 24 (Waste Pile 7)	Deed Certification	Yes	Yes	No
SWMU 25 (Landfill 8)	Deed Certification	Yes	Yes	No
SWMU 59 (WSA)	Deed Certification/ No digging below 6-inches ¹	Yes	Yes	No
SWMU 60 (WSA)	Deed Certification/ No digging below 6-inches ¹	Yes	Yes	No
SWMU 65(WSA)	Deed Certification/ No digging below 6-inches ¹	Yes	Yes	No
AOC 5 (Grounds Maintenance Yard)	Deed Certification	Yes	Yes	No

¹ This institutional control is only required until the EOD range at the WSA is cleared later this year.

² See Appendix B for a list of contaminants of concern (COCs) and corresponding cleanup criteria that have changed from the date of remedy selection/installation (note that changes were not found to impact overall protectiveness of the remedy).

After the TCEQ approves a site report indicating attainment of site closure under RRS 2, the Air Force is required to place proof of deed certification in the Tarrant County deed records (Title 30 Texas Administration Code §335.560). The following information is required to be placed in the deed record:

- Certification signed by the Air Force stating that closure or remediation of the facility or area was carried out in accordance with closure designed to meet §335.555 of this title (relating to RRS 2), which mandates that the remedy eliminates substantial present and future risk, such that no post-closure care or engineering or IC measures are required to protect human health and the environment.
- A metes and bounds description of the portion or portions of the tract of land on which closure or remediation of industrial solid waste, municipal hazardous waste, or contaminants was achieved.
- For a facility that satisfies the conditions of §335.557 of this title (relating to Criteria for Selection of Non-residential Soil Requirements for RRS 2) for use of non-residential soil requirements, a statement that current or future owners of the facility must undertake actions as necessary to protect human health and the environment in accordance with the rules of the TCEQ.

Upon request, TCEQ can provide a statement that information and documents concerning the closure or remediation of the facility or area are available for inspection. The statement shall further describe TCEQ's jurisdiction over the development and final selection of final cleanup criteria at Carswell sites. Closure documentation for SWMUs 22, 23, 24, 25, 59, 60, 65, and AOC 5 is presented in Appendix C.

The Air Force is released from post-closure care responsibilities upon acceptance by the TCEQ of the proof of deed certification. Table 4.1 shows BRAC sites where RRS 2 closure has been approved by the TCEQ, and a brief description of each site is included below.

SWMU 22

SWMU 22 (Landfill 4) is a former landfill that operated during much of the history of Carswell AFB. It is located east of Taxiway 197 (Taxiway Foxtrot) and south of White Settlement Road. The period of official operation of this SWMU was from 1956 to 1975 (A.T. Kearney, 1989). After the period of official operation, the site was converted into a radar facility comprised of three buildings and an UST for storage of diesel fuel. The buildings and UST were removed from the site between 1992 and 2000. SWMU 22 is approximately 9 acres in size. The landfill reportedly received solid domestic waste, partially filled paint cans, cadmium batteries, drums of waste paints, thinners, oils, PD-680, and medical waste as well as potentially small amounts of undocumented hazardous materials. The landfill also received construction debris in the form of concrete, asphalt, wood and trees. Base refuse was reportedly burned and buried at this unit during its operational period. Buried medical waste was encountered during trenching activities at the landfill. Although not required, the Air Force constructed a landfill cover to prevent physical access to the medical waste.

SWMU 23

SWMU 23 (Landfill 5) is a former landfill located 250 feet north of the northwest corner of SWMU 22, adjacent to the western border of the base perimeter road. This area served as an active base landfill from 1962 through 1975. Historic aerial photographs indicate that a clay berm was constructed adjacent to the unnamed tributary during its period of operation. The area behind the berm was then filled to its existing level. SWMU 23 is approximately 3.1 acres in size. The unit reportedly received all types of waste from the flightline area. Wastes managed at SWMU 23 were similar to the wastes managed at SWMU 22 (A.T. Kearney, 1989). Buried medical waste was encountered during trenching activities at the landfill. Although not required, the Air Force constructed a landfill cover to prevent physical access to the medical waste.

SWMU 24

SWMU 24 (Waste Burial Area No. 7) is a triangular strip of land located between SWMUs 22 and 23, adjacent to the base perimeter road and security fencing. SWMU 24 served as an active landfill during the 1960s and is 0.64 acre in size. The unit received drums of cleaning solvents, tetraethyl lead-contaminated sludge, small quantities of undetermined waste, and may have received live ordnance (A.T. Kearney, 1989). Thirty-four 55-gallon drums and ten 5-gallon buckets of trichloroethene (TCE) and TCE-contaminated liquid were removed from the area in 1991. In 2000, a geophysical survey was conducted and indicated the presence of six areas containing buried drums. Each area was excavated and the drums were removed and disposed of properly.

SWMU 25

SWMU 25 (Landfill 8) is a parcel of land located east of Taxiway 197 (Taxiway Foxtrot), south of Taxiway Charlie, north of SWMU 17 (Landfill 7), and west of the base security fence. The unit overlies the underground aqueduct for Farmers Branch Creek. SWMU 25 was used as a fill area during the 1960s. SWMU 25 is 10 acres in size. It reportedly received asphalt, concrete rubble, construction debris, metal, trees, and wood. No hazardous materials were reportedly buried at this site; however, some of the fill materials listed may contain hazardous constituents (A.T. Kearney, 1989). RFI activities conducted between 1997 and 2000 included two geophysical surveys, the excavation of eight exploratory trenches, the installation of 39 direct push technology soil borings, the installation of four monitoring wells, and the collection of two rounds of groundwater samples from existing and new monitoring wells. RFI results concluded that all compounds detected at the site were below site-specific MSCs and were delineated to Standard 1, therefore it was recommended the site be closed under Texas RRS 2.

AOC 5

AOC 5 (Grounds Maintenance Yard) is located in the southeast corner of NAS Fort Worth JRB near the Main Entrance. It is a predominantly graveled yard, with some areas of asphalt pavement. Two small maintenance buildings, a pesticide storage shed, two 500-gallon aboveground storage tanks located on a concrete containment pad, and two office trailers existed at the site prior to demolition in 1997 and 1999. One aboveground storage tank remains. Twenty-three polychlorinated biphenyl (PCB)-containing transformers were removed from the site in 1997.

SWMUs 59, 60, and 65

SWMUs 59, 60, and 65 are located at the Offsite WSA, which is approximately 5 miles west of the former Carswell AFB north of White Settlement Road. The Offsite WSA is located on a 247-acre parcel of fee-owned land surrounded by 264 acres of easement. The site is located between two forks of Live Oak Creek. The Offsite WSA was constructed in 1956 and includes two munitions inspections shops, sixteen ordnance storage buildings, one entry-control building and emergency power plant, an explosive ordnance disposal range, a radioactive waste disposal facility, a water storage tank, and two water wells.

SWMU 59 is a metal enclosure used for the short-term storage (less than 90 days) of hazardous wastes. Entry to the enclosure is provided by a lockable gate-type door with contact information posted on signs. The enclosure is located along the western edge of the concrete pad that surrounds the inspection shop (Building 8503). The soils adjacent to the pad and in a drainage ditch directly west of the enclosure are also considered part of SWMU 59. The SWMU 59 metal enclosure is 4 feet by 5 feet, with an 8-foot high metal roof that overhangs openings along the upper sidewalls. The enclosure is elevated approximately 6 inches above the pad on a concrete floor. There is no lip or berm around the edge of the floor. The site received waste generated from the inspection and maintenance activities including removing rust and repainting bombs performed inside Building 8503. RFI results indicated elevated mercury soil contamination therefore the area west of Building 8503 was excavated to the Texas RRS 2 standards (The Environmental Company, 2001).

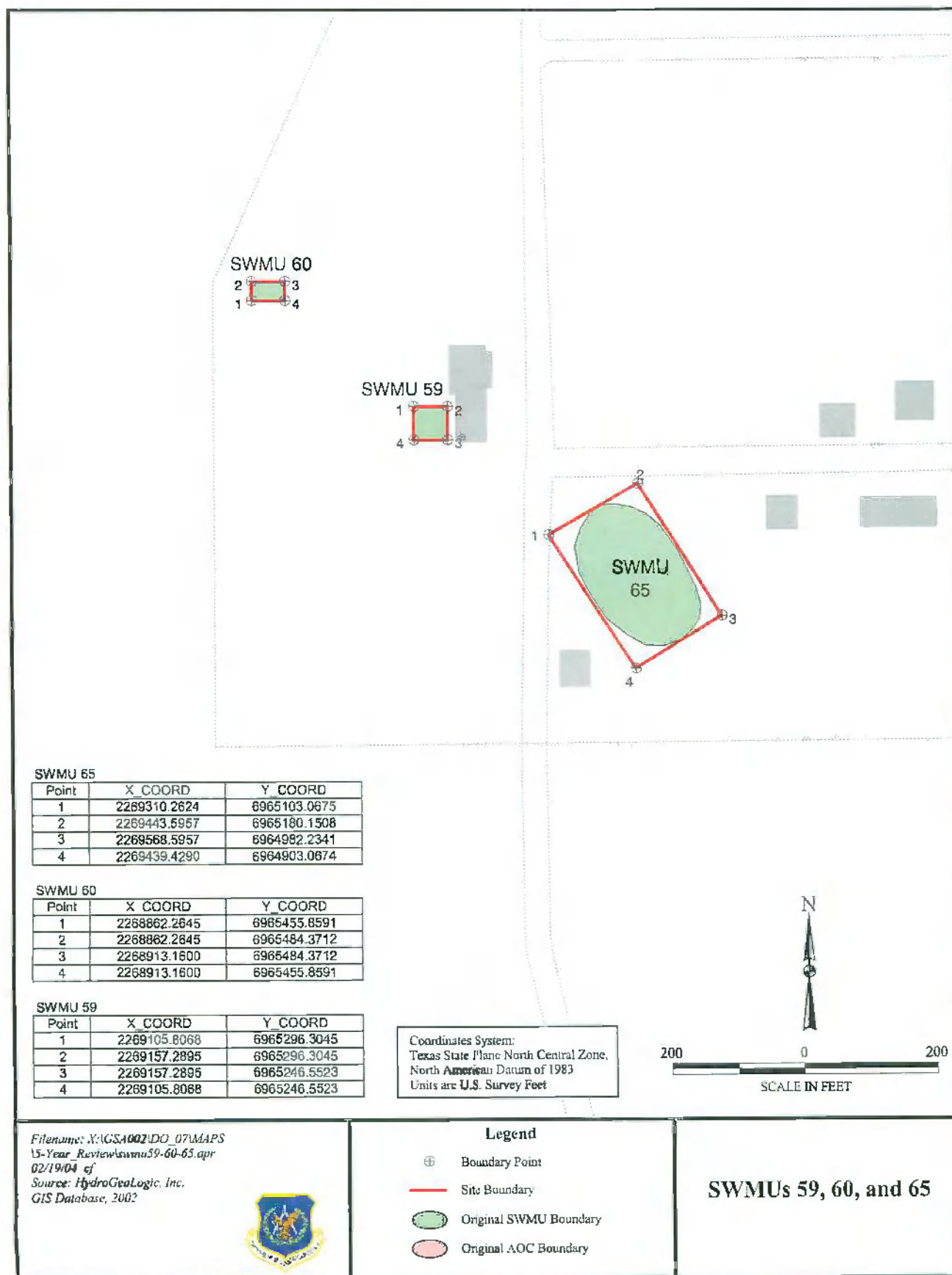
SWMU 60 is a former radioactive waste burial site located approximately 400 feet west of Building 8503 within the Offsite WSA fenced area. The burial site is approximately 100 yards from a farm pond. The site was used between 1957 and 1969 for the disposal of radioactive waste. A chain link fence approximately 10 feet by 10 feet encompasses SWMU 60, which consists of 3 dry wells constructed from 12-inch diameter cast iron pipes encased in 2.25 inches of grout. These pipes are vertically embedded 18 feet into the ground. The pipes were permanently capped in 1969, and then removed with the surrounding soil in 1996. Confirmation soil samples were collected and concentrations were below the established cleanup criteria. The associated groundwater and soil achieved Texas RRS 1 closure standards however SWMU 60 was closed under Texas RRS 2 standards for simplicity of grouping all WSA sites into one closure report (The Environmental Company, 2001).

SWMU 65, also known as Drainage way (DW-1), consists of a ditch located west of Building 8503. The ditch drains toward the southeast directly toward Live Oak Creek (The

CERCLA Five-Year Review Summary Report for 19 Sites—Former Carswell AFB, Fort Worth, Texas

Environmental Company. 1999). SWMU 65 is the WSA Disposal area where quantities of 5 to 10 gallons per year of waste cleaners and solvents were disposed of on the ground. The ditch is associated with Building 8503 waste accumulation activities and therefore is considered a part of SWMU 59 which was closed under Texas RRS 2 standards (The Environmental Company. 2001).

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5.0 RECOMMENDATIONS AND FOLLOW-ON ACTIONS

It is recommended that annual visual site inspections (VSIs) be conducted to ensure that deed restrictions are being enforced and remedies are protective. The following items should be included in each VSI:

- Monitoring wells should be inspected to ensure no damage has occurred to compromise the integrity of the well's protective casing and grout.
- Verification that no digging or trenching has occurred at AOC 16 or the WSA sites (SWMUs 59, 60, and 65) until the EOD range has been cleared (scheduled for early 2006).
- Verification that no groundwater extraction wells have been installed at any of the sites.
- Verification that no buildings have been built directly above contaminated groundwater.

The cleanup criteria and current status will be reevaluated every five years to verify that the final remedy is still protective of human health and the environment.

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6.0 PROTECTIVENESS STATEMENTS

The remedies selected for these eight BRAC sites remain protective of human health and the environment. The remedies appear to be functioning as intended. No information has become available indicating inadequate protection of human or ecological populations. Exposure pathways, land use, COCs, toxicity data, and cleanup criteria (e.g. TCEQ RRSs, alternate concentrations limits) remain unchanged or have not affected the protectiveness of the remedy. A review of cleanup criteria indicated that concentrations did not exceed current cleanup standards. Recommendations and follow-on actions are designed to ensure protectiveness until the time that unlimited land use and unrestricted exposure scenarios are achieved.

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7.0 NEXT REVIEW DATE

The next review will be submitted within five years from the date of this review. Additionally, VSIs will be conducted at the restricted sites on a yearly basis.

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8.0 REFERENCES

- Air Force, 1993. Memorandum of Understanding Between the United States Air Force and the United States Navy on Transfer of Responsibility for Carswell Air Force Base, Texas.
- AFBCA, 2001. Decision Document, 12 Installation Restoration Program Sites, Carswell Air Force Base.
- A.T. Kearney, 1989. RCRA Facility Assessment. Preliminary Review/Visual Site Inspection.
- Earth Tech, Inc. 2002. Semi-Annual Sampling Report, Air Force Plant 4, Fort Worth, Texas.
- Ellis Environmental, Inc., 2002. Draft 2002 Annual Report, Basewide Groundwater Sampling & Analysis Program, NAS Fort Worth JRB, Texas.
- HydroGeoLogic, Inc. (HGL), 2005. Final Focused Feasibility Study Southern Lobe Trichloroethene Groundwater Plume, Former Carswell AFB, Texas.
- HGL, 2001. Final RCRA Facility Investigation, SWMUs 22, 23, 24, and 25, NAS Fort Worth JRB, Texas.
- HGL, 2001. Final Basewide Groundwater Sampling and Analysis Program, 2000 Annual Report, NAS Fort Worth JRB, Texas.
- HGL, 2000. Final Basewide Groundwater Sampling and Analysis Program, 1999 Annual Report, NAS Fort Worth JRB, Texas.
- HGL, 1999. Draft Basewide Groundwater Sampling and Analysis Program, 1998 Annual Report, NAS Fort Worth JRB, Texas.
- HGL, 1998. Final Basewide Groundwater Sampling and Analysis Program, 1997 Annual Report, NAS Fort Worth JRB, Texas.
- IT, 1997. Draft RCRA Facilities Investigation. Sanitary Sewer System, NAS Fort Worth JRB, Carswell Field, Texas.
- IT, 2001. Final Completion Report. Remedial Actions at Landfills LF-04, LF-05, LF-08, and Waste Burial Area (WP-07), NAS Fort Worth (Former Carswell AFB), Fort Worth, Texas.
- Jacobs, 1997. Closure Document for Grounds Maintenance Yard (AOC 5), Site ID OT-39, NAS JRB Fort Worth, Texas.
- Rust Geotech, 1995. Final Record of Decision, Air Force Plant 4.

CERCLA Five-Year Review Summary Report for 19 Sites—Former Carswell AFB, Fort Worth, Texas

- Shaw Environmental, Inc., 2003. Letter Report Former Carswell AFB (Carswell) Property Transfer Site Investigation.
- Texas Administrative Code, Environmental Quality, Title 30: Environmental Quality. Part 1: TNRCC. Chapter 335: Industrial Solid Waste and Municipal Hazardous Waste. Subchapters S: Risk Reduction Standards.
- Texas Administrative Code, Environmental Quality, Title 30: Environmental Quality. Part 1: TNRCC. Chapter 350: Texas Risk Reduction Program. Subchapters C: Affected Property Assessment.
- Texas Commission on Environmental Quality. 2001. Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas.
- The Environmental Company. 2001. Final Closure Report for the Offsite Weapons Storage Area at Naval Air Station Fort Worth Joint Reserve Base. Texas.
- The Environmental Company. 1999. Final RCRA Facility Investigation of the Offsite Weapons Storage Area at Naval Air Station Fort Worth Joint Reserve Base. Carswell Field. Texas.
- U.S. Environmental Protection Agency. 2001. Comprehensive Five Year Review Guidance.

APPENDIX A

RCRA HAZARDOUS WASTE PERMIT No. HW-50289

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List of Attachments:

- A - Legal Description of Facility
- B - Facility Map
- C - List of Incorporated Application Materials
- D - List of Permitted Facility Units (Not Applicable)

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PERMIT SECTION I - FACILITY DESCRIPTION

A. SIZE AND LOCATION OF SITE

A permit is issued to US Naval Air Station Fort Worth, Joint Reserve Base (Formerly Carswell AFB) (hereafter called the permittee), to conduct corrective action at a hazardous waste management facility located at the former Carswell Air Force Base, Fort Worth, in Tarrant County, Texas, drainage area of Segment 0806 in the Trinity River Basin (North Latitude 32°45' 53", West Longitude 97°25' 44 "). The legal description of the facility submitted in permit No. HW-50289-000 application dated January 30, 2001 is hereby incorporate into this permit by reference as noted in "Attachment A". The hazardous waste management facility as delineated by the permittee's application map is hereby made a part of this permit as "Attachment B".

B. INCORPORATED APPLICATION MATERIALS

This permit is based on, and the permittee shall follow the Part A and Part B Industrial and Hazardous Waste Application elements listed in "Attachment C", which are hereby approved subject to the terms of this permit and any other orders of the TNRCC. These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

PERMIT SECTION II. - GENERAL FACILITY STANDARDS

A. STANDARD PERMIT CONDITIONS

The permittee has a duty to comply with the Standard Permit Conditions under 30 TAC Section 305.125. Moreover, the permittee has a duty to comply with the following permit conditions:

1. Modification of Permitted Facilities

The facility units and operational methods authorized are limited to those described herein and by the application submittals identified in Provision I.B. (Incorporated Application Materials). All facility units and operational methods are subject to the terms and conditions of this permit and TNRCC rules. Prior to constructing or operating any facility units in a manner which differs from either the related plans and specifications contained in the permit application or the limitations, terms or conditions of this permit, the permittee must comply with the TNRCC permit amendment/modification rules as provided in 30 TAC Sections 305.62 and 305.69.

2. Duty to Comply

[30 TAC Section 305.142] The permittee must comply with all the conditions of this permit, except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency order issued by the Commission. Any permit noncompliance, other than noncompliance authorized by an emergency order, constitutes a violation of RCRA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

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[II.A.]

3. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

4. Definitions

For purposes of this permit, terms used herein shall have the same meaning as those in 30 TAC Chapters 305, 335, and 350 unless this permit specifically provides otherwise; where terms are not defined in the regulations or the permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

Application data - data used to complete the final application and any supplemental information.

5. Permit Expiration

In order to continue a permitted activity after the expiration date of the permit the permittee shall submit a new permit application at least 180 days before the expiration date of the effective permit, unless permission for a later date has been granted by the Executive Director. Authorization to continue such activity will terminate upon the effective denial of said application.

6. Certification Requirements

[30 TAC Section 305.144] For a new facility, the permittee may not commence storage, processing, or disposal of solid waste; and for a facility being modified, the permittee may not process, store or dispose of solid waste in the modified portion of the facility, except as provided in 30 TAC Section 305.69 (relating to Solid Waste Permit Modification at the Request of the Permittee) until the following has been accomplished:

- a. The permittee has submitted to the Executive Director and the local Regional Office of the TNRCC, by certified mail or hand delivery, a letter signed by the permittee, and signed and sealed by a Texas Licensed Professional Engineer stating that the facility has been constructed or modified in compliance with the permit. If the certification is being provided to document proper closure of a permitted unit, or to certify installation or repair of a tank system, then the certification must be signed and sealed by an independent Texas Licensed Professional Engineer. Required certification shall be in the following form:

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[II.A.6.a.]

"This is to certify that the following activity (Specify activity, e.g., construction, installation, closure, etc., of an item) relating to the following item (Specify the item, e.g., the particular facility, facility unit, unit component, subcomponent part, or ancillary component), authorized or required by TNRCC Permit No. HW-50289-000, has been completed, and that construction of said facility component has been performed in accordance with and in compliance with good engineering practices and the design and construction specifications of Permit No. HW-50289-000".

- b. A certification report has been submitted, with the certification described in Provision II.A.6., which is logically organized and describes in detail the tests, inspections, and measurements performed, their results, and all other bases for the conclusion that the facility unit, unit component, and/or closure have been constructed, installed and/or performed in conformance with the design and construction specifications of this permit and in compliance with this permit. The report shall describe each activity as it relates to each facility unit or component being certified including reference to all applicable permit provisions. The report shall contain the following items, at a minimum:

- (1) Scaled, as-built plan-view and cross-sectional drawings which accurately depict the facility unit and all unit components and subcomponents and which demonstrate compliance with the design and construction specifications approved and detailed in the terms of this permit;
- (2) All necessary references to dimensions, elevations, slopes, construction materials, thickness and equipment; and
- (3) For all drawings and specifications, the date, signature, and seal of a Professional Engineer who is Licensed in the State of Texas.

- c. The Executive Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or if within 15 days of submission of the letter required by paragraph (a) of this section, the permittee has not received notice from the Executive Director of the intent to inspect, prior inspection is waived and the permittee may commence processing, storage, or disposal of solid waste.

* 7. Land Disposal Restrictions

The permittee shall comply with the land disposal restrictions as found in 40 CFR 268 and any subsequent applicable requirements promulgated through the Federal Register. Requirements include modifying/amending the permittee's waste analysis plan to include analyses to determine compliance with applicable treatment standards or prohibition levels, pursuant to 40 CFR 268.7(c) and 264.13(a).

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[II.A.]

8. Dust Suppression

Pursuant to 40 CFR 266.23(b)/30 TAC Section 335.214(b), the permittee shall not use waste, used oil, or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability) for dust suppression or road treatment.

9. Texas Coastal Management Program (Not Applicable)

B. RECORDKEEPING AND REPORTING REQUIREMENTS

1. Monitoring and Records

a. All data submitted to the TNRCC shall be in a manner consistent with the latest version of the Quality Assurance Project Plan for the Texas Natural Resource Conservation Commission for Environmental Monitoring and Measurement Activities Relating to the Resource Conservation and Recovery Act (TNRCC QAPP).

b. [30 TAC Section 305.125(11)(A)] Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity. The method used to obtain a representative sample of the material to be analyzed shall be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Executive Director of the TNRCC. Laboratory methods shall be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, SW-846, 1987, as revised; *Standard Methods for the Examination of Water and Wastewater*, Fifteenth Edition, 1980, and 1981 supplement, or current adopted edition; *RCRA Ground-Water Monitoring: Draft Technical Guidance*, 1992, OSWER Directive 9950.1, or an equivalent method, as specified in the Waste Analysis Plan, Section IV of the Part B Application, and as approved by the Executive Director.

c. [30 TAC Section 305.125(11)(B)] The permittee shall retain in an organized fashion and furnish to the Executive Director, upon request, records of all monitoring information, copies of all reports and records required by this permit, and the certification required by 40 CFR 264.73(b)(9), for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application.

d. [30 TAC Section 305.125(11)(C)] Records of monitoring shall include the following:

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[II.B.1.d.]

- (1) The date, time, and place of sample or measurement;
- (2) The identity of individual who collected the sample or measurement;
- (3) The dates analyses were performed;
- (4) The identity of individual and laboratory who performed the analyses;
- (5) The analytical techniques or methods used; and
- (6) The results of such analyses or measurements.

2. Operating Record

In addition to the recordkeeping and reporting requirements specified elsewhere in this permit, the permittee shall maintain a written operating record at the facility, in accordance with 40 CFR 264.73. These records will be made available to representatives of the TNRCC upon request.

3. Retention of Application Data

[30 TAC Section 305.47] A permittee shall keep records throughout the term of the permit of data used to complete the final application and any supplemental information. All copies of renewals, amendments, revisions and modifications must also be kept at the facility such that the most current documents are available for inspection at all times. All materials, including any related information, submitted to complete the application shall be retained, not just those materials which have been incorporated into the permit.

4. Reporting of Noncompliance

The permittee shall report to the Executive Director of the TNRCC information regarding any noncompliance which may endanger human health or the environment. [30 TAC Section 305.125(9)]

- a. Report of such information shall be provided orally within 24 hours from the time the permittee becomes aware of the noncompliance.
- b. A written submission of such information shall also be provided within five days of the time the permittee becomes aware of the noncompliance. The written submission shall contain the following:

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[II.B.4.b.]

- (1) a description of the noncompliance and its extent;
- (2) the potential danger to human health or safety, or the environment;
- (3) the period of noncompliance, including start and end times;
- (4) if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- (5) steps taken or planned to reduce, eliminate, and prevent the recurrence of the noncompliance, and to mitigate its adverse effects.

5. Twenty-Four Hour Reporting

The following shall be included as information which must be reported orally within 24 hours pursuant to Title 30 TAC Section 305.125(9): [30 TAC Section 305.145]

- a. Information concerning release of any solid waste that may cause an endangerment to public drinking water supplies;
- b. Any information of a release or discharge of solid waste, or of a fire or explosion which could threaten the environment or human health or safety, outside the facility. The description of the occurrence and its cause shall include:
 - (1) name, address, and telephone number of the owner or operator;
 - (2) name, address, and telephone number of the facility;
 - (3) date, time, and type of incident;
 - (4) name and quantity of material(s) involved;
 - (5) the extent of injuries, if any;
 - (6) an assessment of actual or potential hazards to the environment and human health or safety outside the facility, where this is applicable; and
 - (7) estimated quantity and disposition of recovered material that resulted from the incident.

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[II.B.]

6. Notice Waiver

[30 TAC Section 305.145(b)] The Executive Director may waive the five-day written notice requirement specified in Provision II.B.4.b. (Reporting of Noncompliance) in favor of a written report submitted to the Commission within 15 days of the time the permittee becomes aware of the noncompliance or condition.

7. Biennial Report

The permittee shall prepare and submit to the Executive Director a Biennial Report. One copy of the report shall be submitted to the TNRCC Industrial and Hazardous Waste Permits Section and an additional copy shall be submitted to the appropriate TNRCC Regional Office by March 1st of each even-numbered year for the preceding odd-numbered year's activities. This report shall include, at a minimum, all information and records required by 40 CFR 264.75.

8. Pollution Prevention

Facilities subject to 30 TAC Chapter 335, Subchapter Q - Pollution Prevention: Source Reduction and Waste Minimization, must prepare a five year Source Reduction and Waste Minimization Plan and submit a Source Reduction and Waste Minimization Annual Report (SR/WMA Annual Report) to the TNRCC Small Business and Environmental Assistance Division. This report must be submitted annually on the dates specified in the rule.

9. Waste Minimization

The permittee shall annually certify, by January 25th for the previous calendar year, the following information, [40 CFR 264.73(b)(9)]:

- a. that the permittee has a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the permittee's facility operation to the degree determined to be economically practicable; and
- b. that the proposed method of treatment, storage, or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment. This waste minimization certification is to be included in the facility operating records until closure.

10. Annual Detection Monitoring Report (Not Applicable)

11. Manifest Discrepancy Report (Not Applicable)

12. Unmanifested Waste Report (Not Applicable)

13. Monthly Summary (Not Applicable)

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[II.C.]

C. INCORPORATED REGULATORY REQUIREMENTS

1. State Regulations

The following TNRCC regulations are hereby made provisions and conditions of this permit. Issuance of this permit with incorporated rules in no way exempts the permittee from compliance with any other applicable state statute and/or Commission Rule.

- a. 30 TAC Chapter 305, Subchapter A: General Provisions;
- b. 30 TAC Chapter 305, Subchapter C: Application for Permit;
- c. 30 TAC Sections 305.61 - 305.69 (regarding amendments, renewals, transfers, corrections, revocation and suspension of permits);
- d. 30 TAC Sections 305.121 - 305.125 (regarding permit characteristics and conditions);
- e. 30 TAC Sections 305.127 - 305.129 (regarding permit conditions, signatories and variance procedures);
- f. 30 TAC Chapter 305, Subchapter G: Additional Conditions for Hazardous and Industrial Solid Waste Storage, Processing and Disposal Permits;
- g. 30 TAC Chapter 335, Subchapter A
- h. 30 TAC Chapter 335, Subchapter B;
- i. 30 TAC Section 335.152;
- j. 30 TAC Sections 335.153 - 335.155;
- k. 30 TAC Sections 335.166 - 335.167;
- l. 30 TAC Section 335.177;
- m. 30 TAC Chapter 335, Subchapter Q;
- n. 30 TAC Chapter 335, Subchapter S;
- o. 30 TAC Chapter 350.

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[II.C.]

2. Federal Regulations

To the extent applicable to the activities authorized by this permit, the following provisions of 40 CFR Part 264 and Subpart 268, adopted by reference by 30 TAC Section 335.152 and 335 Subchapter O are hereby made provisions and conditions of this permit, to the extent consistent with the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361 (Vernon), and the rules of the TNRCC:

- a. Subpart B -- General Facility Standards;
- b. Subpart C -- Preparedness and Prevention;
- c. Subpart D -- Contingency Plan and Emergency Procedures;
- d. Subpart E -- Manifest System, Recordkeeping, and Reporting;
- e. Subpart G -- Closure and Post-closure;
- f. 40 CFR Part 268 Land Disposal Restrictions;
- g. Subpart AA -- Air Emission Standards for Process Vents;
- h. Subpart BB -- Air Emission Standards for Equipment Leaks;

PERMIT SECTION III. - FACILITY MANAGEMENT

A. OPERATION OF FACILITY

The permittee shall construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, as required by 40 CFR 264.31. All equipment and structures used to manage hazardous waste at the facility shall be maintained in proper operating condition.

B. PERSONNEL TRAINING (Not Applicable)

C. SECURITY

- 1. The permittee shall provide and maintain an artificial or natural barrier which completely surrounds the active waste management portion(s) of the facility and shall have a means to control entry, at all times, through gates or other entrances to these same facility areas.

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[III.C.]

2. The permittee shall post warning signs at all points of access to the active waste management portion(s) of the facility and along the natural and/or artificial barriers in sufficient numbers to be seen from any approach to that (those) portion(s) of the facility. The signs shall be printed so that they may be clearly read from a distance of at least 25 feet, and shall state "Danger - Unauthorized Personnel Keep Out" in English.

D. GENERAL INSPECTION REQUIREMENTS (Not Applicable)

E. CONTINGENCY PLAN (Not Applicable)

F. SPECIAL PERMIT CONDITIONS (Not Applicable)

PERMIT SECTION IV. - WASTES AND WASTE ANALYSIS (Not Applicable)

PERMIT PROVISION V. - AUTHORIZED UNITS AND OPERATIONS (Not Applicable)

A. AUTHORIZED UNITS (Not Applicable)

B. CONTAINER STORAGE AREAS (Not Applicable)

C. TANKS AND TANK SYSTEMS (Not Applicable)

D. SURFACE IMPOUNDMENTS (Not Applicable)

E. WASTE PILES (Not Applicable)

F. LAND TREATMENT UNITS (Not Applicable)

G. LANDFILLS (Not Applicable)

H. INCINERATORS (Not Applicable)

I. BOILERS (Not Applicable)

J. DRIP PADS (Not Applicable)

K. MISCELLANEOUS UNITS (Not Applicable)

L. CONTAINMENT BUILDINGS (Not Applicable)

PERMIT PROVISION VI. - GROUNDWATER DETECTION MONITORING (Not Applicable)

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PERMIT PROVISION VII. - CLOSURE AND POST-CLOSURE REQUIREMENTS (Not Applicable)

- A. **FACILITY CLOSURE (Not Applicable)**
- B. **FINANCIAL ASSURANCE FOR CLOSURE (Not Applicable)**
- C. **STORAGE, PROCESSING, AND COMBUSTION UNIT CLOSURE REQUIREMENTS (Not Applicable)**
- D. **SURFACE IMPOUNDMENT CLOSURE REQUIREMENTS (Not Applicable)**
- E. **LANDFILL CLOSURE AND CERTIFICATION REQUIREMENTS (Not Applicable)**
- F. **CONTAINMENT BUILDINGS CLOSURE REQUIREMENTS (Not Applicable)**
- G. **FACILITY POST-CLOSURE CARE REQUIREMENTS (Not Applicable)**
- H. **POST-CLOSURE FINANCIAL ASSURANCE REQUIREMENTS (Not Applicable)**

PERMIT PROVISION VIII. - LIABILITY REQUIREMENTS (Not Applicable)

PERMIT PROVISION IX. - CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

A. NOTIFICATION OF RELEASE FROM SOLID WASTE MANAGEMENT UNIT

If a land waste management unit (SWMU) is free of contamination or previously subjected to the RCRA Facility Assessment (RFA) dated March 31, 1989, or any release of hazardous waste or hazardous constituents that may have occurred from any SWMU, is discovered subsequent to release of hazardous waste or hazardous constituents by the Executive Director within thirty (30) days of the discovery. Within forty-five (45) days of each discovery, the permittee shall submit an RFA for that unit or release which shall be based on U.S. EPA RCRA Facility Assessment Guidance, October 1986, 7/115 PB-81-117162. If the RFA indicates a release or suspected release of hazardous waste or hazardous constituents, the permittee shall comply with the requirements of Section IX of this permit.

B. CORRECTIVE ACTION OBLIGATIONS

The permittee shall conduct corrective action as necessary to protect human health and the environment for all releases of hazardous waste and hazardous constituents from any solid waste management unit (SWMU). The permittee shall fulfill this obligation by conducting a Corrective Action Program which consists of the Affected Property Assessment (APA) and the Response Action Plan (RAP). The permittee shall conduct an APA to determine whether hazardous waste or hazardous constituents listed in 40 CFR Part 261, Appendix VIII and/or 40 CFR Part 264, Appendix IX have been released to the environment. Upon completion of the RFI the Permittee shall submit to the TNRCC an Affected Property Assessment Report (APAR) to determine whether hazardous waste or hazardous constituents listed in 40 CFR Part 261, Appendix

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[IX.B.]

VIII and/or 40 CFR Part 264, Appendix IX have been released into the environment. If it is determined that hazardous waste or hazardous constituents have been or are being released into the environment, then the permittee may be required to implement those activities listed in the RAP to protect human health and the environment. Upon completion of the RAP implementation the permittee must submit to the TNRCC, a Response Action Effectiveness Report (RAER) which details the activity that will be taken to remove, decontaminate and/or control chemicals of concern (COC) which may be present at the facility in excess of critical Protective Concentration Levels (PCLs) in the environmental media. The report shall include actions taken in response to releases to environmental media from waste a management unit(s) before, during, or after closure.

Upon Executive Director's review of the Corrective Action Program obligations, the permittee may be required to perform any or all of the following:

1. conduct investigation(s);
2. provide additional information;
3. conduct additional investigation(s);
4. investigate an additional unit(s);
5. proceed to the next task in the Corrective Action Program and/or;
6. submit an application for a new compliance plan or modification to an existing compliance plan to implement corrective measures.

Any additional requirements must be completed within the time frame(s) specified by the Executive Director.

C. UNITS REQUIRING INVESTIGATION

¹The permittee shall conduct an RFI for the following SWMU(s) and/or area(s) of contamination in accordance with Provision IX.E.:

<u>SWMU No. / ACP</u>	<u>Descriptions</u>	<u>Status</u>
1	Pathological Waste Incinerator	NFA ¹
2	Pathological Waste Storage Shed	NFA
3	Metal Cans	NFA
4	Facility Dumpsters	NFA
5	Building 1628 West Accumulation Area	RFI ²

¹ NFA = No Further Action,

² RFI = RCRA Facility Investigation,

³ IRA = Interim Remedial Action.

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[IX.C.]

6	Building 1628 Wash Rack and Drain	RFI
7	Building 1628 Oil/Water Separator	NFA
8	Building 1628 Sludge Collection Tank	NFA
9	Building 1628 Work Station Waste Accumulation Area	NFA
10	Building 1617 Work Station Waste Accumulation Area	NFA
11	Building 1617 Waste Accumulation Area	NFA
12	Building 1619 Waste Accumulation Area	IRA ³
13	Building 1710 Waste Accumulation Area	NFA
14	Building 1060 Bead Blaster Collection Tray	NFA
15	Building 1060 Paint Booth Vault	NFA
16	Building 1060 Waste Accumulation Area	NFA
17	Landfill 7	IRA
18	Fire Training Area 1/S99	NFA
19	Fire Training Area 2	IRA
20	Waste Fuel Storage Tank	IRA
21	Waste Oil Tank	IRA
22	Landfill 4	NFA
23	Landfill 5	NFA
24	Waste Burial Area 7	NFA
25	Landfill 8	NFA
26	Landfill 3	NFA
27	Landfill 10	NFA
28	Landfill 1	IRA
29	Landfill 2	IRA
30	Landfill 9	IRA
31	Building 1050 Waste Accumulation Area	IRA
32	Building 1410 Waste Accumulation Area	NFA

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[IX.C.]

33	Building 1420 Waste Accumulation Area	NFA
34	Building 1194 Waste Accumulation Area	NFA
35	Building 1194 Vehicle Refueling Shop Oil/Water Separation System	Closure pending
36	Building 1191 Waste Accumulation Area	NFA
37	Building 1191 Vehicle Maintenance Shop Oil/Water Separator	Closure Pending
38	Building 1269 PCB Transformer Building	NFA
39	Building 1643 Waste Accumulation Area	NFA
40	Building 1643 Oil/Water Separation System	NFA
41	Building 1414 Oil/Water Separation System Field Maintenance Squadron Aerospace Ground Equipment	Closure Pending
42	Building 1414 Waste Accumulation Area	NFA
43	Building 1414 Non-Destructive Inspection Waste Accumulation	NFA
44	Building 1027 Oil/Water Separation System at the Aircraft Washing Hanger	Closure Pending
45	Building 1027 Waste Oil Tank Vault at the Aircraft Washing Hangar	NFA
46	Building 1027 Waste Accumulation Area	NFA
47	Building 1015 Jet Engine Test Cell Oil/Water Separator	Closure Pending
48	Building 1048 Fuel System Floor Drains	NFA
49	Aircraft Washing Area No. 1	RFI
50	Aircraft Washing Area No. 2	RFI
51	Building 1190 Central Waste Holding Area	NFA
52	Building 1190 Oil/Water Separation System	Closure Pending
53	Storm Water Drainage System	NFA
54	Storm Water Interceptors	RFI
55	East Gate Oil/Water Separator	RFI

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[IX.C.]

56	Building 1405 Waste Accumulation Area	NFA
57	Building 1432/1434 Waste Accumulation Area	NFA
58	Pesticide Rinse Area	NFA
59	Building 8503 Weapons Storage Area Waste Accumulation Area	NFA
60	Building 8503 Radioactive Waste Burial Site	NFA
61	Building 1320 Power Production Maintenance Facility Waste Accumulation Area	IRA
62	Landfill 6	IRA
63	Entomology Dry Well	NFA
64	French Underdrain System	IRA
65	Waste Storage Area Disposal Site	NFA
66	Sanitary Sewer System	RFI
67	Building 1340 Oil/Water Separator	NFA
68	POL Tank Farm	NFA
AOC 1	Building 1518 Service Station	IRA
AOC 2	Airfield Groundwater Plume	RFI
AOC 3	Waste Oil Dump	NFA
AOC 4	Fuel Hydrant System	NFA
AOC 5	Grounds Maintenance Yard	NFA
AOC 6	RV Parking Area	NFA
AOC 7	Base Refueling Area	NFA
AOC 8	Aerospace Museum	NFA
AOC 9	Golf Course Maintenance Yard	NFA
AOC 10	Building 1064 Oil/Water Separator	Closure Pending
AOC 11	Building 1060 Oil/Water Separator	Closure Pending

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[IX.C.]

AOC 12	Building 4210 Oil/Water Separator	Closure Pending
AOC 13	Building 1145 Oil/Water Separator	NFA
AOC 14	Unnamed Stream	NFA
AOC 15	Building 1190 Storage Shed	NFA
AOC 16	Family Camp	NFA
AOC 17	Suspected Former Landfill	NFA
AOC 18	Suspected Fire Training Area A	NFA
AOC 19	Suspected Fire Training Area B	Closure Pending

D. VARIANCE FROM INVESTIGATION

The permittee may elect to certify that no hazardous waste or hazardous constituents listed in 40 CFR Part 261, Appendix VIII and/or 40 CFR Part 264, Appendix IX are or were present/managed in a unit listed in Provision IX.C. in lieu of performing the investigation required in Provisions IX.B. and E., provided that confirming data is submitted for the current and past waste(s) managed in the respective unit. The permittee shall submit such information and certification(s) on a unit-by-unit basis in the time frame required in Provision IX.E. for review and approval by the Executive Director of the TNRCC. If the permittee cannot demonstrate and certify that hazardous waste or hazardous constituents are not or were not present in a particular unit, the investigation required in Provisions IX.B. and E. shall be performed for the unit.

E. RCRA FACILITY INVESTIGATION (RFI)

For those SWMUs already complying with the Risk Reduction Standards under 30 TAC Chapter 335, Subchapter S, the permittee should continue to perform corrective action per those standards. Within sixty (60) days of approval of an RFA Report which recommends further investigation of a SWMU(s) or area(s) of contamination in accordance with Provision IX.A., the permittee shall submit a schedule for completion of the RFI(s) to the Executive Director for approval. The permittee shall initiate the investigations in accordance with the approved schedule and shall address all of the items for RFI Workplans and RFI Reports contained in U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994. If the permittee elects to use an alternate investigation approach, Executive Director approval of the workplan will be required prior to initiation of investigation(s). The results of the RFI must be submitted to the Executive Director for approval in the form of an APAR Report within the time frame established in the approved schedule. The APAR Report must document results of the investigation(s). The report shall be considered complete when the full nature and extent of the contamination, Quality Assurance/Quality Control procedures and Data Quality Objectives are documented to the satisfaction of the Executive Director. The permittee shall propose or conduct stabilization/interim corrective measures, as necessary, to protect human health and the environment.

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[IX.]

F. RESPONSE ACTION PLAN (RAP)

Upon approval of the activities outlined in the APAR Report, if it is determined that there has been a release into the environment of hazardous waste or hazardous constituents listed in 40 CFR Part 261, Appendix VIII and/or 40 CFR Part 264 Appendix IX, which appears to be a risk to human health and the environment, then within the time frame(s) specified by the Executive Director following approval of the APAR Report, the permittee shall submit a RAP. This plan shall evaluate the risk, identify and evaluate corrective measure alternatives and recommend appropriate corrective measure(s) to protect human health and the environment. The RAP shall address all of the applicable items in 30 TAC 350 Subchapter B and Subchapter E and the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994.

1. Response Action Completion Report (RACR)

The permittee shall submit a Response Action Completion Report (RACR) within the time frame required by the Executive Director, not to exceed one-hundred-eighty (180) days from the date of approval of the RAP Report. The RACR shall address all of the items for Corrective Measures Implementation (CMI) Workplans contained in the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994. If the RAP does not propose a permanent remedy, then a RAP shall be submitted as part of a new compliance plan application or as a modification/amendment application to an existing compliance plan. The RAP shall contain detailed final engineering design and monitoring plans and schedules necessary to implement the selected remedy. Implementation of the corrective measures shall be addressed through a new and/or a modified/amended compliance plan. Upon installation of a corrective action system based upon the approved RAP, the permittee shall submit a RACR. To report the progress of the corrective measures, the permittee shall submit periodic Response Action Effectiveness Reports (RAER) to the TNRCC in accordance with the schedule specified in the compliance plan to show the progress of actions taken.

PERMIT PROVISION X. - AIR EMISSION STANDARDS

A. PROCESS VENTS AND EQUIPMENT LEAKS

1. Emissions from this facility must not cause or contribute to a condition of "air pollution" as defined in Section 382.003 of the Texas Health and Safety Code Ann. or violate Section 382.085 of the Texas Health and Safety Code Ann. If the Executive Director of the TNRCC determines that such a condition or violation occurs, the permittee shall implement additional abatement measures as necessary to control or prevent the condition or violation.

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[X.A.]

2. Requirements for Subparts AA and BB

- a. The permittee must comply with the requirements of 30 TAC Section 335.152(a)(17)/40 CFR Part 264 Subpart AA and 30 TAC Section 335.152(a)(18)/40 CFR Part 264 Subpart BB, as applicable.
- b. The permittee shall include in the Biennial Report, required in Provision II.B.7., a statement that hazardous waste management units or associated ancillary equipment at this facility are not subject to any of the requirements in Provision X.A.2.a., if these requirements are not applicable to any hazardous waste management units or associated ancillary equipment at this facility. If at any time any hazardous waste management units or associated ancillary equipment become subject to the requirements in Provision X.A.2.a., the permittee must immediately comply with these requirements.

ATTACHMENTS

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Attachment A

Sheet 1 of 1

The legal description submitted by the permittee as attachment B of the part A permit application is hereby incorporated into the permit by reference.

Topographic Map of NAS Fort Worth JRB and Vicinity Fort Worth, Texas

Legend

- NAS Fort Worth JRB (Carswell Field)
- Surrounding Area Within 1 Mile from NAS Fort Worth Boundary

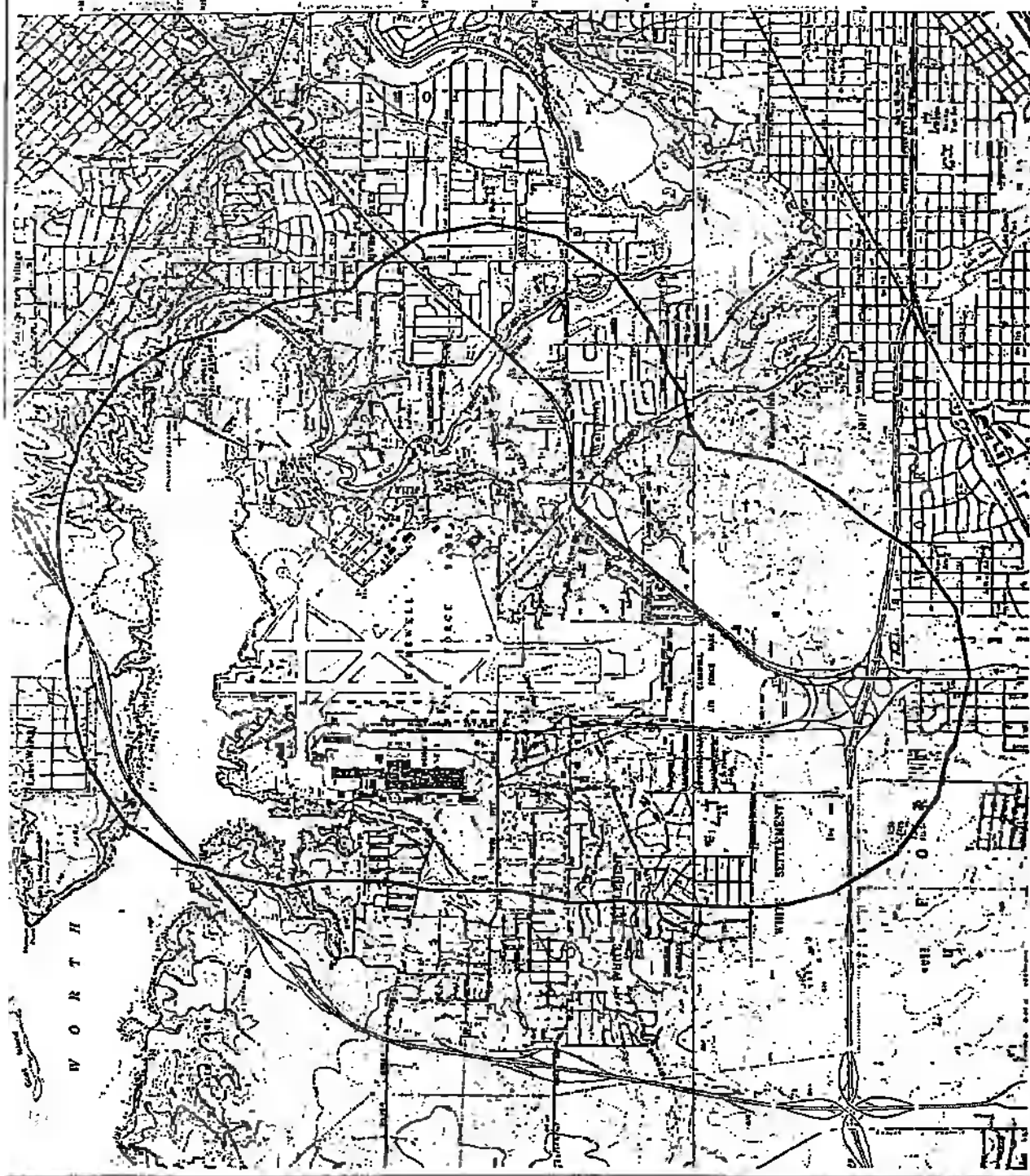
CRSWL AR # 742

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Attachment B
Sheet 1 of 1



File Name: J:\Map\01219\01219\CRSWL_permit\01219_topo.mxd
Created by: jspencer\01219\01219_topo.mxd
Revised:
Project: AFCEC-1198A
Map Source: 1966 USGS Topographic Map (Topographic)
1966 USGS Topographic Map (Topographic)
1966 USGS Topographic Map (Topographic)
1966 USGS Topographic Map (Topographic)

H
G



LIST OF INCORPORATED APPLICATION MATERIALS

The following is a list of Part A and Part B Industrial and Hazardous Waste Application elements which are incorporated into all Industrial and Hazardous Waste permits by reference as per Provision I.B.

TNRCC PART A Application Form

I. General Information

I.B. - Authorized Agents

I.C. - Identify entity who will conduct facility operation.

I.D. - Facility Ownership

III. Wastes and Waste Management

III.C.1. - Location of Waste Management Units - Topographic Map extending one mile beyond facility.

TNRCC PART B Application Form

I. General Information

I.A. - Applicant

I.C. - Facility Location - Address

I.F. - Wastewater and Stormwater Disposition

II. Facility Siting Criteria

III. Facility Management

IV. Wastes and Waste Analysis

V. Engineering Reports

VI. Geology Report

VII. Closure and Post-Closure Care Plans

VIII. Financial Assurance

IX. Releases from Solid Waste Units & Corrective Action IX.B.App. I - Facility and SWMU Location Maps

X. Air Emission Standards

XII. Confidential Materials

APPENDIX B

SCREENING VALUES COMPARISON

Table B.1
SWMU 22 (Landfill 4)
Surface Soil Screening Values Comparison

Method	Compound	Units	Soil RRS 2 used in RFI (mg/Kg)	Current Soil RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW6010	Aluminum	mg/kg	22035	22035	--	--
SW6010	Antimony	mg/kg	0.6	0.6	--	--
SW6010	Arsenic	mg/kg	5.85	5.85	--	--
SW6010	Barium	mg/kg	233	233	--	--
SW6010	Beryllium	mg/kg	1.02	1.02	--	--
SW6010	Cadmium	mg/kg	0.556	0.556	--	--
SW6010	Calcium	mg/kg	N/A	N/A	--	--
SW6010	Chromium (total)	mg/kg	25.86	25.86	--	--
SW6010	Cobalt	mg/kg	610	610	--	--
SW6010	Copper	mg/kg	130	130	--	--
SW6010	Iron	mg/kg	N/A	N/A	--	--
SW6010	Lead	mg/kg	30.97	30.97	--	--
SW7421		mg/kg	30.97	30.97	--	--
SW6010	Magnesium	mg/kg	N/A	N/A	--	--
SW6010	Manganese	mg/kg	1400	1400	--	--
SW7471	Mercury	mg/kg	0.2	0.2	--	--
SW6010	Molybdenum	mg/kg	51	51	--	--
SW6010	Nickel	mg/kg	200	200	--	--
SW6010	Potassium	mg/kg	N/A	N/A	--	--
SW6010	Selenium	mg/kg	5	5	--	--
SW6010	Sodium	mg/kg	N/A	N/A	--	--
SW6010	Thallium	mg/kg	2.43	2.43	--	--
SW6010	Vanadium	mg/kg	72	72	--	--
SW6010	Zinc	mg/kg	3100	3100	--	--
SW9030	Sulfide	mg/kg	N/A	N/A	--	--
SW8270	Naphthalene	mg/kg	200	200	--	--
SW8260	Toluene	mg/kg	100	100	--	--
SW8270	2-Methylnaphthalene	mg/kg	410	410	--	--
SW8270	4-Nitrophenol	mg/kg	N/A	20	New RRS 2	No
SW8270	Acenaphthene	mg/kg	30	30	--	--
SW8310		mg/kg	30	30	--	--
SW8270	Anthracene	mg/kg	50	50	--	--
SW8310		mg/kg	50	50	--	--
SW8270	Benzo(a)anthracene	mg/kg	0.33	0.33	--	--
SW8310		mg/kg	0.039	0.039	--	--
SW8270	Benzo(a)pyrene	mg/kg	0.33	0.33	--	--
SW8310		mg/kg	0.02	0.02	--	--
SW8270	Benzo(b)fluoranthene	mg/kg	0.33	0.33	--	--
SW8310		mg/kg	0.039	0.039	--	--
SW8270	Benzo(g,h,i)perylene	mg/kg	310	310	--	--
SW8310		mg/kg	310	310	--	--
SW8270	Benzo(k)fluoranthene	mg/kg	0.39	0.39	--	--
SW8310		mg/kg	0.39	0.39	--	--
SW8270	bis(2-Ethylhexyl)phthalate	mg/kg	0.6	0.6	--	--
SW8270	Chrysene	mg/kg	3.9	3.9	--	--
SW8310		mg/kg	3.9	3.9	--	--
SW8270	Dibenzo(a,h)anthracene	mg/kg	0.33	0.33	--	--

Table B.1
SWMU 22 (Landfill 4)
Surface Soil Screening Values Comparison

Method	Compound	Units	Soil RRS 2 used in RFI (mg/Kg)	Current Soil RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW8310	Dibenz(a,h)anthracene	mg/kg	0.02	0.02	--	--
SW8270	Dibenzofuran	mg/kg	41	41	--	--
SW8270	Fluoranthene	mg/kg	410	410	--	--
SW8310		mg/kg	410	410	--	--
SW8270	Fluorene	mg/kg	410	410	--	--
SW8310		mg/kg	410	410	--	--
SW8270	Indeno(1,2,3-c,d)pyrene	mg/kg	0.33	0.33	--	--
SW8310		mg/kg	0.039	0.039	--	--
SW8270	Phenanthrene	mg/kg	35	35	--	--
SW8310		mg/kg	35	35	--	--
SW8270	Pyrene	mg/kg	220	220	--	--
SW8310		mg/kg	220	220	--	--

Notes:

RRS 2 values reflect rounding to 2 significant figures by the TCEQ.

GWP-Ind = TCEQ groundwater protection industrial standard

SAI-Ind = TCEQ inhalation, ingestion, and dermal contact industrial standard

RRS 2 used is the most conservative between the GWP-Ind or the SAI-Ind. For inorganics, in cases where the the background value exceeds the most conservative of the GWP-Ind and SAI-Ind, the background value becomes RRS 2.

-- = No change.

Table B.2
SWMU 22 (Landfill 4)
Subsurface Soil Screening Values Comparison

Method	Analyte	Units	Soil RRS 2 used in RFI (mg/Kg)	Current Soil RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW6010	Aluminum	mg/kg	20260	20260	--	--
SW6010	Antimony	mg/kg	0.712	0.712	--	--
SW6010	Arsenic	mg/kg	6.58	6.58	--	--
SW6010	Barium	mg/kg	200	200	--	--
SW6010	Beryllium	mg/kg	1.13	1.13	--	--
SW6010	Cadmium	mg/kg	0.59	0.59	--	--
SW6010	Calcium	mg/kg	N/A	N/A	--	--
SW6010	Chromium (total)	mg/kg	16.31	16.31	--	--
SW6010	Cobalt	mg/kg	610	610	--	--
SW6010	Copper	mg/kg	130	130	--	--
SW6010	Iron	mg/kg	N/A	N/A	--	--
SW6010	Lead	mg/kg	12.66	12.66	--	--
SW7421		mg/kg	12.66	12.66	--	--
SW6010	Magnesium	mg/kg	N/A	N/A	--	--
SW6010	Manganese	mg/kg	1400	1400	--	--
SW7471	Mercury	mg/kg	0.2	0.2	--	--
SW6010	Molybdenum	mg/kg	51	51	--	--
SW6010	Nickel	mg/kg	200	200	--	--
SW6010	Potassium	mg/kg	N/A	N/A	--	--
SW6010	Selenium	mg/kg	5	5	--	--
SW6010	Silver	mg/kg	51	51	--	--
SW6010	Sodium	mg/kg	N/A	N/A	--	--
SW6010	Thallium	mg/kg	1.5	1.5	--	--
SW6010	Vanadium	mg/kg	72	72	--	--
SW6010	Zinc	mg/kg	3100	3100	--	--
SW9030	Sulfide	mg/kg	N/A	N/A	--	--
SW8081	Chlordane	mg/kg	0.2	0.2	--	--
SW8081	Dieldrin	mg/kg	0.01	0.01	--	--
SW8081	p,p'-DDE	mg/kg	0.084	0.084	--	--
SW8081	PCB-1260	mg/kg	1	1	--	--
SW8260	1,2,4-Trichlorobenzene	mg/kg	7	7	--	--
SW8260	1,2,4-Trimethylbenzene	mg/kg	N/A	140	New RRS 2	No
SW8260	1,2-Dichlorobenzene	mg/kg	60	60	--	--
SW8260	1,3,5-Trimethylbenzene	mg/kg	N/A	120	New RRS 2	No
SW8260	1,3-Dichlorobenzene	mg/kg	N/A	71	New RRS 2	No
SW8260	1,4-Dichlorobenzene	mg/kg	7.5	7.5	--	--
SW8260	2-Hexanone	mg/kg	N/A	87	New RRS 2	No
SW8260	Acetone	mg/kg	1000	1000	--	--
SW8260	Ethylbenzene	mg/kg	70	70	--	--
SW8260	Isopropylbenzene	mg/kg	N/A	1000	New RRS 2	No
SW8260	m- & p-Xylene (sum of isomers)	mg/kg	1000	1000	--	--
SW8260	Methyl ethyl ketone	mg/kg	6100	6100	--	--
SW8260	Methylene chloride	mg/kg	0.5	0.5	--	--
SW8260	Naphthalene	mg/kg	200	200	--	--
SW8270	Naphthalene	mg/kg	200	200	--	--
SW8260	o-Xylene	mg/kg	1000	1000	--	--

Table B.2
SWMU 22 (Landfill 4)
Subsurface Soil Screening Values Comparison

Method	Analyte	Units	Soil RRS 2 used in RFI (mg/Kg)	Current Soil RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW8260	Tetrachloroethene	mg/kg	0.5	0.5	--	--
SW8260	Toluene	mg/kg	100	100	--	--
SW8270	2-Methylnaphthalene	mg/kg	410	410	--	--
SW8310	Acenaphthene	mg/kg	30	30	--	--
SW8310	Anthracene	mg/kg	50	50	--	--
SW8270	Benzo(a)anthracene	mg/kg	0.33	0.33	--	--
SW8310		mg/kg	0.039	0.039	--	--
SW8270	Benzo(a)pyrene	mg/kg	0.33	0.33	--	--
SW8310		mg/kg	0.02	0.02	--	--
SW8270	Benzo(b)fluoranthene	mg/kg	0.33	0.33	--	--
SW8310		mg/kg	0.039	0.039	--	--
SW8310	Benzo(g,h,i)perylene	mg/kg	310	310	--	--
SW8270	Benzo(k)fluoranthene	mg/kg	0.39	0.39	--	--
SW8310		mg/kg	0.39	0.39	--	--
SW8270	Benzyl butyl phthalate	mg/kg	2000	2000	--	--
SW8270	bis(2-Ethylhexyl)phthalate	mg/kg	0.6	0.6	--	--
SW8270	Chrysene	mg/kg	3.9	3.9	--	--
SW8310		mg/kg	3.9	3.9	--	--
SW8310	Dibenzo(a,h)anthracene	mg/kg	0.02	0.02	--	--
SW8270	Dibenzofuran	mg/kg	41	41	--	--
SW8270	Fluoranthene	mg/kg	410	410	--	--
SW8310		mg/kg	410	410	--	--
SW8270	Indeno(1,2,3-c,d)pyrene	mg/kg	0.33	0.33	--	--
SW8310		mg/kg	0.039	0.039	--	--
SW8270	Phenanthrene	mg/kg	35	35	--	--
SW8310		mg/kg	35	35	--	--
SW8270	Pyrene	mg/kg	220	220	--	--
SW8310		mg/kg	220	220	--	--

Notes:

RRS 2 values reflect rounding to 2 significant figures by the TCEQ.

GWP-Ind = TCEQ groundwater protection industrial standard

SAI-Ind = TCEQ inhalation, ingestion, and dermal contact industrial standard

RRS 2 used is the most conservative between the GWP-Ind or the SAI-Ind. For inorganics, in cases where the the background value exceeds the most conservative of the GWP-Ind and SAI-Ind, the background value becomes RRS 2.

-- = No change.

Table B.3
SWMU 23 (Landfill 5)
Surface Soil Screening Values Comparison

Method	Analyte	Units	RRS-2 used in RFI (mg/Kg)	Current RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW6010	Aluminum	mg/kg	22035	22035	--	--
SW6010	Antimony	mg/kg	0.6	0.6	--	--
SW6010	Arsenic	mg/kg	5.85	5.85	--	--
SW6010	Barium	mg/kg	233	233	--	--
SW6010	Beryllium	mg/kg	1.02	1.02	--	--
SW6010	Cadmium	mg/kg	0.556	0.556	--	--
SW6010	Calcium	mg/kg	N/A	N/A	--	--
SW6010	Chromium (total)	mg/kg	25.86	25.86	--	--
SW6010	Cobalt	mg/kg	610	610	--	--
SW6010	Copper	mg/kg	130	130	--	--
SW6010	Iron	mg/kg	N/A	N/A	--	--
SW6010	Lead	mg/kg	30.97	30.97	--	--
SW7421	Lead	mg/kg	30.97	30.97	--	--
SW6010	Magnesium	mg/kg	N/A	N/A	--	--
SW6010	Manganese	mg/kg	1400	1400	--	--
SW7471	Mercury	mg/kg	0.2	0.2	--	--
SW6010	Molybdenum	mg/kg	51	51	--	--
SW6010	Nickel	mg/kg	200	200	--	--
SW6010	Potassium	mg/kg	N/A	N/A	--	--
SW6010	Selenium	mg/kg	5	5	--	--
SW6010	Silver	mg/kg	51	51	--	--
SW6010	Sodium	mg/kg	N/A	N/A	--	--
SW6010	Thallium	mg/kg	2.43	2.43	--	--
SW6010	Vanadium	mg/kg	72	72	--	--
SW6010	Zinc	mg/kg	3100	3100	--	--
SW8260	2-Hexanone	mg/kg	N/A	87	New RRS 2	No
SW8260	Acetone	mg/kg	1000	1000	--	--
SW8260	Methyl isobutyl ketone	mg/kg	820	820	--	--
SW8270	Acenaphthene	mg/kg	30	30	--	--
SW8270	Anthracene	mg/kg	50	50	--	--
SW8270	Benzo(a)anthracene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(a)pyrene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(b)fluoranthene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(g,h,i)perylene	mg/kg	310	310	--	--
SW8270	Benzo(k)fluoranthene	mg/kg	0.39	0.39	--	--
SW8270	Benzyl butyl phthalate	mg/kg	2000	2000	--	--
SW8270	bis(2-Ethylhexyl)phthalate	mg/kg	0.6	0.6	--	--
SW8270	Chrysene	mg/kg	3.9	3.9	--	--
SW8270	Dibenzo(a,h)anthracene	mg/kg	0.33	0.33	--	--
SW8270	Dibenzofuran	mg/kg	41	41	--	--
SW8270	Di-n-butyl phthalate	mg/kg	1000	1000	--	--
SW8270	Fluoranthene	mg/kg	410	410	--	--
SW8270	Fluorene	mg/kg	410	410	--	--
SW8270	Indeno(1,2,3-c,d)pyrene	mg/kg	0.33	0.33	--	--
SW8270	Phenanthrene	mg/kg	35	35	--	--
SW8270	Pyrene	mg/kg	220	220	--	--

Notes:

RRS 2 values reflect rounding to 2 significant figures by the TCEQ.

GWP-Ind = TCEQ groundwater protection industrial standard

SAI-Ind = TCEQ inhalation, ingestion, and dermal contact industrial standard

RRS 2 used is the most conservative between the GWP-Ind or the SAI-Ind. For inorganics, in cases where the background value exceeds the most conservative of the GWP-Ind and SAI-Ind, the background value becomes RRS 2.

-- = No change.

Table B.4
SWMU 23 (Landfill 5)
Subsurface Soil Screening Values Comparison

Method	Analyte	Units	RRS-2 used in RFI (mg/Kg)	Current RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW6010	Aluminum	mg/kg	20260	20260	--	--
SW6010	Antimony	mg/kg	0.712	0.712	--	--
SW6010	Arsenic	mg/kg	6.58	6.58	--	--
SW6010	Barium	mg/kg	200	200	--	--
SW6010	Beryllium	mg/kg	1.13	1.13	--	--
SW6010	Cadmium	mg/kg	0.59	0.59	--	--
SW6010	Calcium	mg/kg	N/A	N/A	--	--
SW6010	Chromium (total)	mg/kg	16.31	16.31	--	--
SW6010	Cobalt	mg/kg	610	610	--	--
SW6010	Copper	mg/kg	130	130	--	--
SW6010	Iron	mg/kg	N/A	N/A	--	--
SW6010	Lead	mg/kg	12.66	12.66	--	--
SW7421	Lead	mg/kg	12.66	12.66	--	--
SW6010	Magnesium	mg/kg	N/A	N/A	--	--
SW6010	Manganese	mg/kg	1400	1400	--	--
SW7471	Mercury	mg/kg	0.2	0.2	--	--
SW6010	Molybdenum	mg/kg	51	51	--	--
SW6010	Nickel	mg/kg	200	200	--	--
SW6010	Potassium	mg/kg	N/A	N/A	--	--
SW6010	Selenium	mg/kg	5	5	--	--
SW6010	Sodium	mg/kg	N/A	N/A	--	--
SW6010	Thallium	mg/kg	1.5	1.5	--	--
SW6010	Vanadium	mg/kg	72	72	--	--
SW6010	Zinc	mg/kg	3100	3100	--	--
SW9030	Sulfide	mg/kg	N/A	N/A	--	--
SW8260	1,2,4-Trimethylbenzene	mg/kg	N/A	140	New RRS 2	No
SW8260	1,2-Dichlorobenzene	mg/kg	60	60	--	--
SW8260	1,2-Dichloroethene, cis-	mg/kg	7	7	--	--
SW8260	1,2-Dichloroethene, trans-	mg/kg	10	10	--	--
SW8260	1,3,5-Trimethylbenzene	mg/kg	N/A	120	New RRS 2	No
SW8260	1,4-Dichlorobenzene	mg/kg	7.5	7.5	--	--
SW8270	1,4-Dichlorobenzene	mg/kg	7.5	7.5	--	--
SW8260	2-Hexanone	mg/kg	N/A	87	New RRS 2	No
SW8260	Acetone	mg/kg	1000	1000	--	--
SW8260	Chlorobenzene	mg/kg	10	10	--	--
SW8260	Ethylbenzene	mg/kg	70	70	--	--
SW8260	Isopropylbenzene	mg/kg	N/A	1000	New RRS 2	No
SW8260	m- & p-Xylene (sum of isomers)	mg/kg	1000	1000	--	--
SW8260	Methyl ethyl ketone	mg/kg	6100	6100	--	--
SW8260	Methyl isobutyl ketone	mg/kg	820	820	--	--
SW8260	Methylene chloride	mg/kg	0.5	0.5	--	--
SW8260	Naphthalene	mg/kg	200	200	--	--
SW8270	Naphthalene	mg/kg	200	200	--	--
SW8260	n-Butylbenzene	mg/kg	N/A	410	New RRS 2	No
SW8260	n-Propylbenzene	mg/kg	N/A	410	New RRS 2	No
SW8260	o-Xylene	mg/kg	1000	1000	--	--
SW8260	p-Isopropyltoluene	mg/kg	N/A	N/A	--	--
SW8260	Toluene	mg/kg	100	100	--	--
SW8260	Trichloroethene	mg/kg	0.5	0.5	--	--
SW8270	2-Methylnaphthalene	mg/kg	410	410	--	--
SW8270	Acenaphthene	mg/kg	30	30	--	--
SW8270	Anthracene	mg/kg	50	50	--	--
SW8270	Benzo(a)anthracene	mg/kg	0.33	0.33	--	--

Table B.4
SWMU 23 (Landfill 5)
Subsurface Soil Screening Values Comparison

Method	Analyte	Units	RRS-2 used in RFI (mg/Kg)	Current RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW8270	Benzo(a)pyrene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(b)fluoranthene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(g,h,i)perylene	mg/kg	310	310	--	--
SW8270	Benzo(k)fluoranthene	mg/kg	0.39	0.39	--	--
SW8270	Benzyl butyl phthalate	mg/kg	2000	2000	--	--
SW8270	bis(2-Ethylhexyl)phthalate	mg/kg	0.6	0.6	--	--
SW8270	Chrysene	mg/kg	3.9	3.9	--	--
SW8270	Dibenzo(a,h)anthracene	mg/kg	0.33	0.33	--	--
SW8270	Dibenzofuran	mg/kg	41	41	--	--
SW8270	Di-n-butyl phthalate	mg/kg	1000	1000	--	--
SW8270	Fluoranthene	mg/kg	410	410	--	--
SW8270	Fluorene	mg/kg	410	410	--	--
SW8270	Indeno(1,2,3-c,d)pyrene	mg/kg	0.33	0.33	--	--
SW8270	m- & p-Cresol (sum of isomers)	mg/kg	51	51	--	--
SW8270	Phenanthrene	mg/kg	35	35	--	--
SW8270	Pyrene	mg/kg	220	220	--	--

Notes:

RRS 2 values reflect rounding to 2 significant figures by the TCEQ.

GWP-Ind = TCEQ groundwater protection industrial standard

SAI-Ind = TCEQ inhalation, ingestion, and dermal contact industrial standard

RRS 2 used is the most conservative between the GWP-Ind or the SAI-Ind. For inorganics, in cases where the background value exceeds the most conservative of the GWP-Ind and SAI-Ind, the background value becomes RRS 2.

-- = No change.

Table B.5
SWMU 24 (Waste Pile 7)
Surface Soil Screening Values Comparison

Method	Analyte	Units	RRS-2 used in RFI (mg/Kg)	Current RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW6010	Aluminum	mg/kg	22035	22035	--	--
SW6010	Antimony	mg/kg	0.6	0.6	--	--
SW6010	Arsenic	mg/kg	5.85	5.85	--	--
SW6010	Barium	mg/kg	233	233	--	--
SW6010	Beryllium	mg/kg	1.02	1.02	--	--
SW6010	Cadmium	mg/kg	0.556	0.556	--	--
SW6010	Calcium	mg/kg	N/A	N/A	--	--
SW6010	Chromium (total)	mg/kg	25.86	25.86	--	--
SW6010	Cobalt	mg/kg	610	610	--	--
SW6010	Copper	mg/kg	130	130	--	--
SW6010	Iron	mg/kg	N/A	N/A	--	--
SW6010	Lead	mg/kg	30.97	30.97	--	--
SW7421	Lead	mg/kg	30.97	30.97	--	--
SW6010	Magnesium	mg/kg	N/A	N/A	--	--
SW6010	Manganese	mg/kg	1400	1400	--	--
SW7471	Mercury	mg/kg	0.2	0.2	--	--
SW6010	Molybdenum	mg/kg	51	51	--	--
SW6010	Nickel	mg/kg	200	200	--	--
SW6010	Potassium	mg/kg	N/A	N/A	--	--
SW6010	Selenium	mg/kg	5	5	--	--
SW6010	Silver	mg/kg	51	51	--	--
SW6010	Sodium	mg/kg	N/A	N/A	--	--
SW6010	Thallium	mg/kg	2.43	2.43	--	--
SW6010	Vanadium	mg/kg	72	72	--	--
SW6010	Zinc	mg/kg	3100	3100	--	--
SW8260	2-Hexanone	mg/kg	N/A	87	New RRS 2	No
SW8260	Methyl isobutyl ketone	mg/kg	820	820	--	--
SW8270	Naphthalene	mg/kg	200	200	--	--
SW8260	Tetrachloroethene	mg/kg	0.5	0.5	--	--
SW8260	Trichloroethene	mg/kg	0.5	0.5	--	--
SW8270	Acenaphthene	mg/kg	30	30	--	--
SW8270	Anthracene	mg/kg	50	50	--	--
SW8270	Benzo(a)anthracene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(a)pyrene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(b)fluoranthene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(g,h,i)perylene	mg/kg	310	310	--	--
SW8270	Benzo(k)fluoranthene	mg/kg	0.39	0.39	--	--
SW8270	Benzyl butyl phthalate	mg/kg	2000	2000	--	--
SW8270	Chrysene	mg/kg	3.9	3.9	--	--
SW8270	Dibenzo(a,h)anthracene	mg/kg	0.33	0.33	--	--
SW8270	Dibenzofuran	mg/kg	41	41	--	--
SW8270	Fluoranthene	mg/kg	410	410	--	--
SW8270	Fluorene	mg/kg	410	410	--	--
SW8270	Indeno(1,2,3-c,d)pyrene	mg/kg	0.33	0.33	--	--
SW8270	Phenanthrene	mg/kg	35	35	--	--
SW8270	Pyrene	mg/kg	220	220	--	--

Notes:

RRS 2 values reflect rounding to 2 significant figures by the TCEQ.

GWP-Ind = TCEQ groundwater protection industrial standard

SAI-Ind = TCEQ inhalation, ingestion, and dermal contact industrial standard

RRS 2 used is the most conservative between the GWP-Ind or the SAI-Ind. For inorganics, in cases where the background value exceeds the most conservative of the GWP-Ind and SAI-Ind, the background value becomes RRS 2.

-- = No change.

Table B.6
SWMU 24 (Waste Pile 7)
Subsurface Soil Screening Values Comparison

Method	Analyte	Units	RRS-2 used in RFI (mg/Kg)	Current RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW6010	Aluminum	mg/kg	20260	20260	--	--
SW6010	Antimony	mg/kg	0.712	0.712	--	--
SW6010	Arsenic	mg/kg	6.58	6.58	--	--
SW6010	Barium	mg/kg	200	200	--	--
SW6010	Beryllium	mg/kg	1.13	1.13	--	--
SW6010	Calcium	mg/kg	N/A	N/A	--	--
SW6010	Chromium (total)	mg/kg	16.31	16.31	--	--
SW6010	Cobalt	mg/kg	610	610	--	--
SW6010	Copper	mg/kg	130	130	--	--
SW6010	Iron	mg/kg	N/A	N/A	--	--
SW6010	Lead	mg/kg	12.66	12.66	--	--
SW7421	Lead	mg/kg	12.66	12.66	--	--
SW6010	Magnesium	mg/kg	N/A	N/A	--	--
SW6010	Manganese	mg/kg	1400	1400	--	--
SW7471	Mercury	mg/kg	0.2	0.2	--	--
SW6010	Molybdenum	mg/kg	51	51	--	--
SW6010	Nickel	mg/kg	200	200	--	--
SW6010	Potassium	mg/kg	N/A	N/A	--	--
SW6010	Selenium	mg/kg	5	5	--	--
SW6010	Sodium	mg/kg	N/A	N/A	--	--
SW6010	Thallium	mg/kg	1.5	1.5	--	--
SW6010	Vanadium	mg/kg	72	72	--	--
SW6010	Zinc	mg/kg	3100	3100	--	--
SW8260	2-Hexanone	mg/kg	N/A	87	New RRS 2	No
SW8260	Acetone	mg/kg	1000	1000	--	--
SW8260	Acrylonitrile	mg/kg	0.053	0.053	--	--
SW8260	Dichlorodifluoromethane	mg/kg	2000	2000	--	--
SW8260	m- & p-Xylene (sum of isomers)	mg/kg	1000	1000	--	--
SW8260	Tetrachloroethene	mg/kg	0.5	0.5	--	--
SW8260	Trichloroethene	mg/kg	0.5	0.5	--	--
SW8270	Benzo(g,h,i)perylene	mg/kg	310	310	--	--
SW8270	bis(2-Ethylhexyl)phthalate	mg/kg	0.6	0.6	--	--
SW8270	Diethyl phthalate	mg/kg	8200	8200	--	--

Notes:

RRS 2 values reflect rounding to 2 significant figures by the TCEQ.

GWP-Ind = TCEQ groundwater protection industrial standard

SAI-Ind = TCEQ inhalation, ingestion, and dermal contact industrial standard

RRS 2 used is the most conservative between the GWP-Ind or the SAI-Ind. For inorganics, in cases where the background value exceeds the most conservative of the GWP-Ind and SAI-Ind, the background value becomes RRS 2.

-- = No change.

Table B.7
SWMU 25 (Landfill 8)
Surface Soil Screening Values Comparison

Method	Analyte	Units	RRS-2 used in RFI (mg/Kg)	Current RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW6010	Aluminum	mg/kg	22035	22035	--	--
SW6010	Antimony	mg/kg	0.6	0.6	--	--
SW6010	Arsenic	mg/kg	5.85	5.85	--	--
SW6010	Barium	mg/kg	233	233	--	--
SW6010	Beryllium	mg/kg	1.02	1.02	--	--
SW6010	Cadmium	mg/kg	0.556	0.556	--	--
SW6010	Calcium	mg/kg	N/A	N/A	--	--
SW6010	Chromium (total)	mg/kg	25.86	25.86	--	--
SW6010	Cobalt	mg/kg	610	610	--	--
SW6010	Copper	mg/kg	130	130	--	--
SW6010	Iron	mg/kg	N/A	N/A	--	--
SW6010	Lead	mg/kg	30.97	30.97	--	--
SW7421	Lead	mg/kg	30.97	30.97	--	--
SW6010	Magnesium	mg/kg	N/A	N/A	--	--
SW6010	Manganese	mg/kg	1400	1400	--	--
SW7471	Mercury	mg/kg	0.2	0.2	--	--
SW6010	Molybdenum	mg/kg	51	51	--	--
SW6010	Nickel	mg/kg	200	200	--	--
SW6010	Potassium	mg/kg	N/A	N/A	--	--
SW6010	Selenium	mg/kg	5	5	--	--
SW6010	Silver	mg/kg	51	51	--	--
SW7761	Silver	mg/kg	51	51	--	--
SW6010	Sodium	mg/kg	N/A	N/A	--	--
SW6010	Thallium	mg/kg	2.43	2.43	--	--
SW6010	Vanadium	mg/kg	72	72	--	--
SW6010	Zinc	mg/kg	3100	3100	--	--
SW9010	Cyanide	mg/kg	20	20	--	--
SW9030	Sulfide	mg/kg	N/A	N/A	--	--
SW8260	2-Hexanone	mg/kg	N/A	87	New RRS 2	No
SW8260	m- & p-Xylene (sum of isomers)	mg/kg	1000	1000	--	--
SW8260	Methyl isobutyl ketone	mg/kg	820	820	--	--
SW8260	Methylene chloride	mg/kg	0.5	0.5	--	--
SW8270	Naphthalene	mg/kg	200	200	--	--
SW8260	Tetrachloroethene	mg/kg	0.5	0.5	--	--
SW8260	Toluene	mg/kg	100	100	--	--
SW8260	Trichloroethene	mg/kg	0.5	0.5	--	--
SW8270	2-Methylnaphthalene	mg/kg	410	410	--	--
SW8270	Acenaphthene	mg/kg	30	30	--	--
SW8270	Acenaphthylene	mg/kg	30	30	--	--
SW8270	Anthracene	mg/kg	50	50	--	--
SW8310	Anthracene	mg/kg	50	50	--	--
SW8270	Benzo(a)anthracene	mg/kg	0.33	0.33	--	--
SW8310	Benzo(a)anthracene	mg/kg	0.039	0.039	--	--
SW8270	Benzo(a)pyrene	mg/kg	0.33	0.33	--	--
SW8310	Benzo(a)pyrene	mg/kg	0.02	0.02	--	--

Table B.7
SWMU 25 (Landfill 8)
Surface Soil Screening Values Comparison

Method	Analyte	Units	RRS-2 used in RFI (mg/Kg)	Current RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW8270	Benzo(b)fluoranthene	mg/kg	0.33	0.33	--	--
SW8310	Benzo(b)fluoranthene	mg/kg	0.039	0.039	--	--
SW8270	Benzo(g,h,i)perylene	mg/kg	310	310	--	--
SW8310	Benzo(g,h,i)perylene	mg/kg	310	310	--	--
SW8270	Benzo(k)fluoranthene	mg/kg	0.39	0.39	--	--
SW8310	Benzo(k)fluoranthene	mg/kg	0.39	0.39	--	--
SW8270	Benzyl butyl phthalate	mg/kg	2000	2000	--	--
SW8270	bis(2-Ethylhexyl)phthalate	mg/kg	0.6	0.6	--	--
SW8270	Chrysene	mg/kg	3.9	3.9	--	--
SW8310	Chrysene	mg/kg	3.9	3.9	--	--
SW8270	Dibenzo(a,h)anthracene	mg/kg	0.33	0.33	--	--
SW8310	Dibenzo(a,h)anthracene	mg/kg	0.02	0.02	--	--
SW8270	Dibenzofuran	mg/kg	41	41	--	--
SW8270	Di-n-butyl phthalate	mg/kg	1000	1000	--	--
SW8270	Fluoranthene	mg/kg	410	410	--	--
SW8310	Fluoranthene	mg/kg	410	410	--	--
SW8270	Fluorene	mg/kg	410	410	--	--
SW8270	Indeno(1,2,3-c,d)pyrene	mg/kg	0.33	0.33	--	--
SW8310	Indeno(1,2,3-c,d)pyrene	mg/kg	0.039	0.039	--	--
SW8270	Phenanthrene	mg/kg	35	35	--	--
SW8310	Phenanthrene	mg/kg	35	35	--	--
SW8270	Pyrene	mg/kg	220	220	--	--
SW8310	Pyrene	mg/kg	220	220	--	--

Notes:

RRS 2 values reflect rounding to 2 significant figures by the TCEQ.

GWP-Ind = TCEQ groundwater protection industrial standard

SAI-Ind = TCEQ inhalation, ingestion, and dermal contact industrial standard

RRS 2 used is the most conservative between the GWP-Ind or the SAI-Ind. For inorganics, in cases where the background value exceeds the most conservative of the GWP-Ind and SAI-Ind, the background value becomes RRS 2.

-- = No change.

Table B.8
SWMU 25 (Landfill 8)
Subsurface Soil Screening Values Comparison

Method	Analyte	Units	RRS-2 used in RFI (mg/Kg)	Current RRS 2 (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW6010	Aluminum	mg/kg	20260	20260	--	--
SW6010	Antimony	mg/kg	0.712	0.712	--	--
SW6010	Arsenic	mg/kg	6.58	6.58	--	--
SW6010	Barium	mg/kg	200	200	--	--
SW6010	Beryllium	mg/kg	1.13	1.13	--	--
SW6010	Cadmium	mg/kg	0.59	0.59	--	--
SW6010	Calcium	mg/kg	N/A	N/A	--	--
SW6010	Chromium (total)	mg/kg	16.31	16.31	--	--
SW6010	Cobalt	mg/kg	610	610	--	--
SW6010	Copper	mg/kg	130	130	--	--
SW6010	Iron	mg/kg	N/A	N/A	--	--
SW6010	Lead	mg/kg	12.66	12.66	--	--
SW7421	Lead	mg/kg	12.66	12.66	--	--
SW6010	Magnesium	mg/kg	N/A	N/A	--	--
SW6010	Manganese	mg/kg	1400	1400	--	--
SW7471	Mercury	mg/kg	0.2	0.2	--	--
SW6010	Molybdenum	mg/kg	51	51	--	--
SW6010	Nickel	mg/kg	200	200	--	--
SW6010	Potassium	mg/kg	N/A	N/A	--	--
SW6010	Selenium	mg/kg	5	5	--	--
SW6010	Sodium	mg/kg	N/A	N/A	--	--
SW6010	Thallium	mg/kg	1.5	1.5	--	--
SW6010	Vanadium	mg/kg	72	72	--	--
SW6010	Zinc	mg/kg	3100	3100	--	--
SW9010	Cyanide	mg/kg	20	20	--	--
SW9030	Sulfide	mg/kg	N/A	N/A	--	--
SW8260	1,2-Dichloroethene, cis-	mg/kg	7	7	--	--
SW8260	Acetone	mg/kg	1000	1000	--	--
SW8260	Benzene	mg/kg	0.5	0.5	--	--
SW8260	Ethylbenzene	mg/kg	70	70	--	--
SW8260	Methyl ethyl ketone	mg/kg	6100	6100	--	--
SW8260	Methylene chloride	mg/kg	0.5	0.5	--	--
SW8260	Tetrachloroethene	mg/kg	0.5	0.5	--	--
SW8260	Toluene	mg/kg	100	100	--	--
SW8260	Trichloroethene	mg/kg	0.5	0.5	--	--
SW8270	Acenaphthene	mg/kg	30	30	--	--
SW8270	Anthracene	mg/kg	50	50	--	--
SW8270	Benzo(a)anthracene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(a)pyrene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(b)fluoranthene	mg/kg	0.33	0.33	--	--
SW8270	Benzo(g,h,i)perylene	mg/kg	310	310	--	--
SW8270	Benzo(k)fluoranthene	mg/kg	0.39	0.39	--	--
SW8270	bis(2-Ethylhexyl)phthalate	mg/kg	0.6	0.6	--	--
SW8270	Chrysene	mg/kg	3.9	3.9	--	--
SW8270	Dibenzo(a,h)anthracene	mg/kg	0.33	0.33	--	--
SW8270	Di-n-butyl phthalate	mg/kg	1000	1000	--	--
SW8270	Fluoranthene	mg/kg	410	410	--	--
SW8270	Indeno(1,2,3-c,d)pyrene	mg/kg	0.33	0.33	--	--
SW8270	Phenanthrene	mg/kg	35	35	--	--
SW8270	Pyrene	mg/kg	220	220	--	--

Notes:

RRS 2 values reflect rounding to 2 significant figures by the TCEQ.

GWP-Ind = TCEQ groundwater protection industrial standard

SAI-Ind = TCEQ inhalation, ingestion, and dermal contact industrial standard

RRS 2 used is the most conservative between the GWP-Ind or the SAI-Ind. For inorganics, in cases where the background value exceeds the most conservative of the GWP-Ind and SAI-Ind, the background value becomes RRS 2.

-- = No change.

Table B.9
AOC 5 (Grounds Maintenance Yard)
Soil Screening Values Comparison

Method	Compound	Units	Surface RRS 2 Used in Closure Report ¹ (mg/Kg)	Current Surface RRS 2 ² (mg/Kg)	Change in RRS 2	Is Highest Detection of Compound Above Current RRS 2 Value?
SW6010B	Arsenic	mg/kg	5	5.85	higher	No
SW6010B	Mercury	mg/kg	0.2	0.2	--	--
SW6010B	Nickel	mg/kg	10	200	higher	No
SW6010B	Zinc	mg/kg	410000	3100	lower	No
SW7421	Lead	mg/kg	1.5	30.97	higher	No
SW8080A	p,p'-DDE	mg/kg	0.025	0.084	higher	No
SW8080A	p,p'-DDT	mg/kg	0.025	0.084	higher	No
SW8270C	Hexachlorobenzene	mg/kg	0.1	0.33	higher	No
SW8270C	bis(2-Chloroethyl) ether	mg/kg	0.0077	0.33	higher	No
SW8270C	n-nitrosodi-n-propylamine	mg/kg	0.0012	0.33	higher	No
SW8270C	Benzo(a)anthracene	mg/kg	0.012	0.33	higher	No
SW8270C	Benzo(a)pyrene	mg/kg	0.02	0.33	higher	No
SW8270C	Benzo(b)fluoranthene	mg/kg	0.012	0.33	higher	No
SW8270C	Benzo(k)fluoranthene	mg/kg	0.12	0.39	higher	No
SW8270C	bis(2-Ethylhexyl)phthalate	mg/kg	0.6	0.6	--	--
SW8270C	Chrysene	mg/kg	1.2	3.9	higher	No
SW8270C	Dibenzo(a,h)anthracene	mg/kg	0.0012	0.33	higher	No
SW8270C	Indeno(1,2,3-c,d)pyrene	mg/kg	0.012	0.33	higher	No

Notes:

RRS 2 values reflect rounding to 2 significant figures by the TCEQ.

GWP-Res = TCEQ groundwater protection residential standard

GWP-Ind = TCEQ groundwater protection industrial standard

SAI-Ind = TCEQ inhalation, ingestion, and dermal contact industrial standard

¹ RRS 2 used in Draft Closure Report for Grounds Maintenance Yard, October 2000. The RRS 2 used was the GWP-SAI value.

² RRS 2 used is the most conservative between the GWP-Ind or the SAI-Ind.

For inorganics, in cases where the background value exceeds the most conservative of the GWP-Ind and SAI-Ind, the background value becomes RRS 2.

-- = No change.

Evaluation of Clean-Up Levels Identified For The Offsite Weapons Storage Area (SWMUs 59, 60, and 65)

Because the offsite weapon storage area (WSA) was closed under RRS 2 residential standards using a human health and ecological risk assessment, rather than RRS 2 Industrial standards, it required a different approach to evaluating the remedy protectiveness. The *Final Closure Report for the Offsite Weapons Storage Area Naval Air Station Fort Worth Joint Reserve Base, Carswell Field, Texas* and the Human Health Evaluation, included within the *RCRA Facility Investigation of the Offsite Weapons Storage Area at Naval Air Station Fort Worth Joint Reserve Base, Carswell Field, Texas* were reviewed to determine if the site remains protective of human health and the environment (The Environmental Company (TEC), 2001, 1999).

To evaluate the WSA clean-up levels for non-underground storage tank (UST) sites, the current RRS 2 GWP- Residential and medium specific concentrations (MSCs) were used to identify chemicals for which the clean-up levels may have changed. For UST sites, the clean-up levels were obtained from the *Risk-Based Corrective Action for Leaking Storage Tank Sites* and the toxicity factors used in the development of these concentrations were compared to current values (RG-36, TNRCC, 1994). Below is a summary of the findings.

Non-UST sites: The approach to the identification of compounds of potential concern (COPCs) remains protective of human health. Pathways and receptors were evaluated and remain protective. The RRS 2 GWP-Residential clean-up levels increased or remain unchanged with the exception of two compounds, dibenzofuran and naphthalene, which decreased. The RRS 2 GWP-Residential clean-up standard for dibenzofuran decreased from 110 mg/kg to 15 mg/kg, and the clean-up level for naphthalene decreased from 150 mg/kg to 73 mg/kg. The maximum detections of these compounds remained below the updated clean-up level and since the clean-up level increased or remained the same for the other COPCs, the original evaluation remains protective of human health.

UST sites: The toxicity factors used in the development of these concentrations were compared to current values. The toxicity factors have not changed. Therefore, the clean-up levels identified in the original evaluation remain protective of human health.

For the original environmental evaluation, the maximum detected concentrations were screened against soil benchmarks for plants and soil benchmarks for invertebrates. In addition, chemical intakes for upper trophic level receptors were calculated and compared to no observed adverse effects levels (NOAELs). The screening benchmarks and NOAELs used in the original evaluation were compared to current values recommended by the Texas Commission on Environmental Quality. All screening benchmarks and NOAELs in the original assessment were either equal to or less than current

recommendations. Therefore, the original evaluation remains protective of ecological receptors.

In summary, the human health and environmental evaluation contained within The *Final Closure Report for the Offsite Weapons Storage Area Naval Air Station Fort Worth Joint Reserve Base, Carswell Field, Texas* and *RCRA Facility Investigation of the Offsite Weapons Storage Area at Naval Air Station Fort Worth Joint Reserve Base, Carswell Field, Texas* (TEC, 2001, 1999) remain protective of human and ecological receptors.

APPENDIX C
SITE DOCUMENTATION

Robert J. Huston, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
Kathleen Hartnett White, *Commissioner*
Jeffrey A. Saitas, *Executive Director*

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

October 8, 2002

Mr. Charles C. Pringle
HQ AFCEE/ERB
3207 Sidney Brook
Brooks AFB, TX 78235-5344

Re: Transmittal of Permit Renewal
Industrial Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
EPA I.D. No. TX 0571924042
WWC No. 10090046

Dear Mr. Pringle:

Enclosed is a copy of the above referenced renewal permit issued pursuant to the Texas Health and Safety Code, Chapter 361, in response to your application dated January 30, 2001.

Questions on the permit should be directed to Mr. Dipak Bhakta of the I&HW Permits Section at 512/239-2256. If responding by letter please use mail code MC 130 after the recipient's name.

Sincerely,



Wade M. Wheatley, T.D., Director
Waste Permits Division

WMW/DGB/pt

Enclosure

cc: Dipak Bhakta, TNRCC I&HW Section, Waste Permits Division - Austin



**Texas Natural Resource
Conservation Commission
Austin, Texas**

**PERMIT FOR INDUSTRIAL SOLID
WASTE MANAGEMENT SITE issued
under provisions of TEXAS HEALTH AND
SAFETY CODE ANN.
Chapter 361 (Vernon)**

PERMIT NO. HW - 50289-000
EPA ID. NO. TX 0571924042-0
ISWR NO. 65004

Name of Permittee: US Naval Air Station Fort Worth, Joint Reserve Base (Formerly
Carswell AFB)
Carswell AFB, Building 1619
Fort Worth, Texas 76127

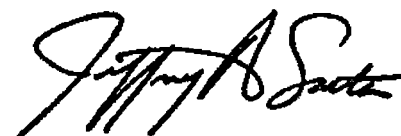
Site Owner: Carswell AFB
Building 1619
Fort Worth, Texas 76127

Classification of Site: Hazardous industrial solid waste corrective action

The permittee is authorized to manage wastes in accordance with the limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules of the Commission and other Orders of the Commission, and laws of the State of Texas. This permit does not exempt the permittee from compliance with the Texas Clean Air Act. This permit will be valid until canceled, amended, modified or revoked by the Commission, except that the authorization to store, of wastes shall expire midnight, 10 years after the date of renewal permit approval. This permit was originally issued on February 7th, 1991.

All provisions in this permit stem from State and/or Federal authority. Those provisions marked with an asterisk (*) stem from Federal authority and will implement the applicable requirements of HSWA for which the Texas Natural Resource Conservation Commission has not been authorized. Those provisions marked with a double asterisk (**) stem from federal authority only.

ISSUED: **SEP 25 2002**



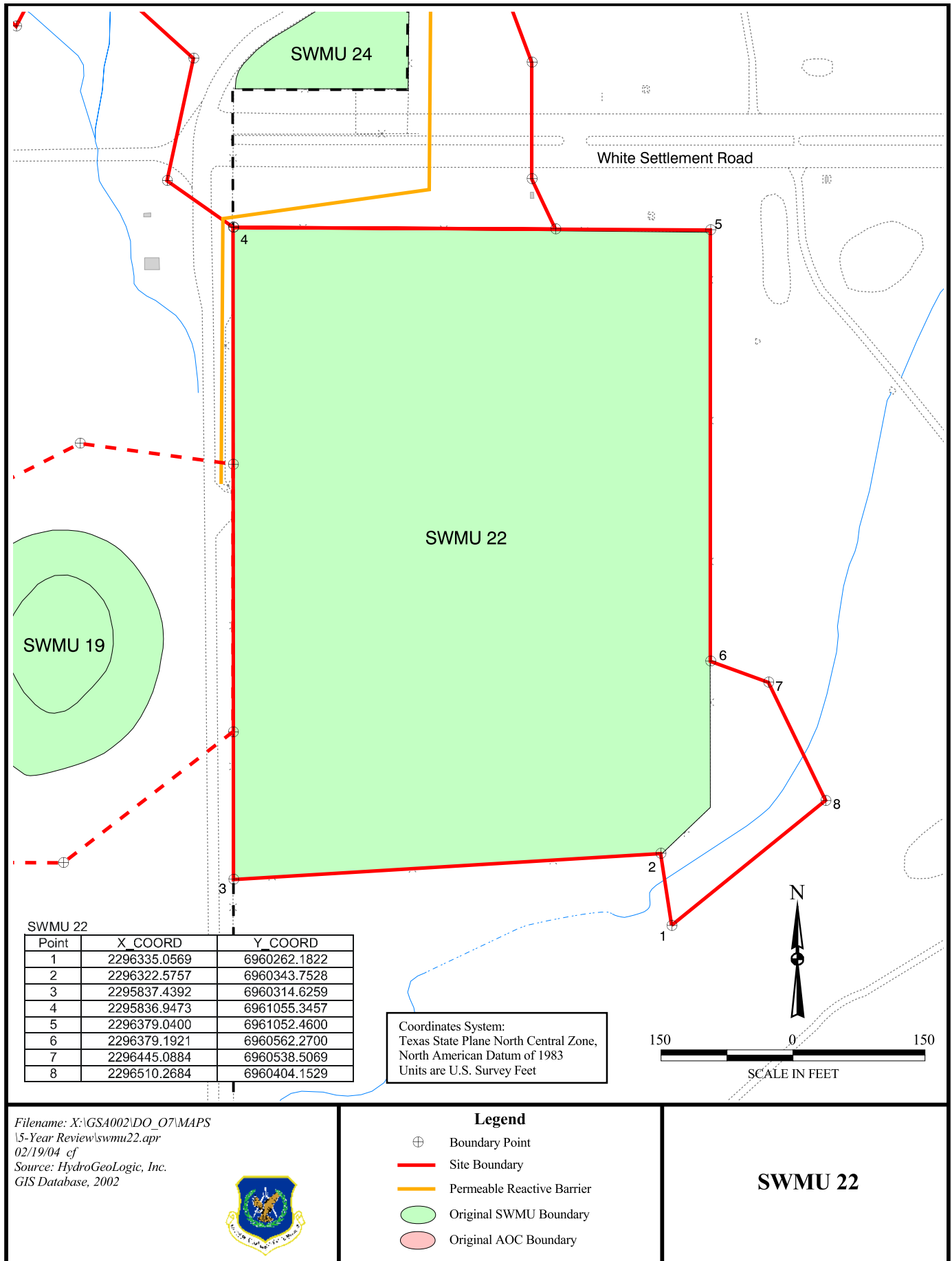
For The Commission

Permit No. HW-50289-000
 Permittee: US Naval Air Station

Continuation of Sheet 2 of 22

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SWMU 22



Photo of SWMU 22 looking south, southeast (2000).

29
STATE OF TEXAS
TARRANT COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
SWMU 22 / LANDFILL AREA 4

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission (TNRCC) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Tarrant County, Texas in compliance with the recordation requirements of said rules:

I

The Department of the Air Force has performed a remediation of the land described herein. A copy of the Notice of Registration No. 65004, including a description of the facility, is attached hereto and is made part of this filing. A list of the known waste constituents, including known concentrations in soil, which have been left in place is attached hereto and is made part of this filing. Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 65004 files, which are available for inspection upon request at the central office of the TNRCC in Austin, Texas.

The TNRCC derives its authority to review the remediation of this tract of land from the Texas Solid Waste Disposal Act, § 361.002, Texas Health and Safety Code, Chapter 361, which enables the TNRCC to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to the Texas Water Code, § 5.012 and § 5.013, Texas Water Code, Annotated, Chapter 5, the TNRCC is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the TNRCC requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the TNRCC of the suitability of this land for any purpose, nor does it constitute any guarantee by the TNRCC that the remediation standards specified in this certification have been met by the Department of the Air Force.

II

Being a tract of land located in the J. M. Shreeve Survey, A-1456, Tarrant County, Texas. Said tract being a portion of Carswell Air Force Base previously surveyed by T.D. Disheroon in October of 1976 and revised in October of 1978 of which survey is filed with the Corp of Engineers, Fort Worth Division, said tract also being a portion of the NAS Fort Worth JRB Overall Area per plat of survey called boundary resurvey of a tract known as NAS Fort Worth JRB (AKA Carswell Air Force Base) Tarrant County, Texas prepared by Baird, Hampton & Brown, Inc., Fort Worth, Texas, dated January 14, 1998 filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract being more particularly described by metes and bounds as follows:

Beginning at a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-07" (Y=6961052.46, X=2296379.04, NAD83 datum SPC Texas North Central Zone 4202) from which a Corp of Engineer Brass Monument Number 100 bears South 81 degrees 19 minutes 23 seconds East, a distance of 2337.25 feet, said brass monument as shown on the above mentioned surveys; thence South 00 degrees 01 minutes 04 seconds East, a distance of 490.19 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 70 degrees 10 minutes 12 seconds East, a distance of 70.05 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 25 degrees 52 minutes 47 seconds East, a distance of 149.33 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 50 degrees 58 minutes 58 minutes West, a distance of 225.51 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 08 degrees 41 minutes 58 seconds West, a distance of 82.52 feet to a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-05"; thence South 86 degrees 33 minutes 51 seconds West, a distance of 486.01 feet to a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-04"; thence North 00 degrees 02 minutes 17 seconds West, a distance of 740.72 feet to a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-08"; thence South 89 degrees 41 minutes 41 seconds East, a distance of 542.10 feet to the point of beginning and containing 416,232 square feet or 9.555 acres of land. Reference bearing basis per USCGS Monument ELEC and USCGS Monument RUN using NAD 83 datum.

Semi-Volatile Organic Compound (SVOC)-contaminated soil has been remediated to meet non-residential (i.e., industrial/commercial soil criteria), in accordance with a plan designed to meet the TNRCC's requirements in 31 Texas Administrative Code, §335.555, which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential.

In accordance with the requirements for Standard 2 cleanups where the remedy is based upon non-residential soil criteria, the current owner has undertaken actions as necessary to protect human health or the environment in accordance with the rules of the TNRCC.

Table 1.1
Maximum Concentrations of Contaminants Left in Place
SWMU 22 / Landfill 4
NAS Fort Worth, JRB

Method	Analyte	Result	Method	Analyte	Result
SW6010	Aluminum	12700 J	SW8260	2-Hexanone	0.007
SW6010	Antimony	0.36 F	SW8260	Acetone	0.16
SW6010	Antimony	0.99 J	SW8260	Ethylbenzene	0.058
SW6010	Arsenic	16.1 F	SW8260	Isopropylbenzene	0.13
SW6010	Barium	107	SW8260	m- & p-Xylene (sum of	0.29
SW6010	Beryllium	1	SW8260	Methyl ethyl ketone	0.043
SW6010	Cadmium	0.73 F	SW8260	Methylene chloride	0.002
SW6010	Calcium	320000	SW8260	o-Xylene	0.24
SW6010	Chromium (total)	22.7 J	SW8260	Tetrachloroethene	0.012
SW6010	Cobalt	8.2 F	SW8260	Toluene	0.022
SW6010	Copper	17.4	SW8270	2-Methylnaphthalene	1.4
SW6010	Iron	17000 J	SW8270	4-Nitrophenol	0.16 F
SW7421	Lead	81.5 F	SW8270	Acenaphthene	2.4
SW6010	Magnesium	2740 J	SW8270	Anthracene	5.3
SW6010	Manganese	508 J	SW8270	Benzo(a)anthracene	34
SW6010	Molybdenum	1.9 F	SW8270	Benzo(a)pyrene	37
SW6010	Nickel	16.1 F	SW8270	Benzo(b)fluoranthene	39
SW6010	Potassium	1940 J	SW8270	Benzo(g,h,i)perylene	13 J
SW6010	Selenium	16.6 F	SW8270	Benzo(k)fluoranthene	22
SW6010	Silver	0.6 F	SW8270	bis(2-Ethylhexyl)phthalate	1.3
SW6010	Sodium	436	SW8270	Chrysene	38
SW6010	Thallium	29.2 F	SW8270	Dibenzo(a,h)anthracene	4.9
SW6010	Vanadium	44	SW8270	Dibenzofuran	1.3
SW6010	Zinc	63.3	SW8270	Fluoranthene	60 J
SW7471	Mercury	0.14	SW8270	Fluorene	2.2
SW8081	PCB-1260	0.13 F	SW8270	Indeno(1,2,3-c,d)pyrene	25
SW8260	1,2,4-Trichlorobenzene	5.8 J	SW8270	Naphthalene	19
SW8260	1,2-Dichlorobenzene	1.8	SW8270	Phenanthrene	35 J
SW8260	1,3,5-Trimethylbenzene	1.5 F	SW8270	Pyrene	45 J
SW8260	1,3-Dichlorobenzene	0.76 F	SW9030	Sulfide	30.5 S
SW8260	1,4-Dichlorobenzene	0.76 F			

III

STATE OF TEXAS
TARRANT COUNTY

The owner of the site is Department of the Air Force, and its address is Air Force Base Conversion Agency (AFBCA), Headquarters Air Force Center of Environmental Excellence (AFCEE)/Environmental Restoration Branch (ERB), 3207 North Road, Brooks Air Force Base, Texas 78235-5363, where more specific information may be obtained from the Base Environmental Coordinator.

EXECUTED this the 19 day of April, 2001.

Department of the Air Force

Charles C. Pringle
Charles C. Pringle, P. E.
Base Environmental Coordinator

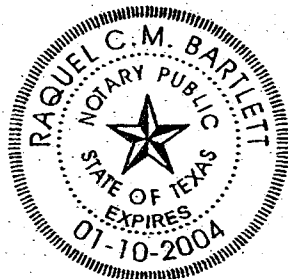
BEFORE ME, on this the 19 day of April 2001, personally appeared Charles C. Pringle, Base Environmental Coordinator, Air Force Base Conversion Agency, United States Air Force, known to me to be the person and agent of said government agency whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 19 day of April, 2001.

Raquel C. M. Bartlett
Notary Public in and for the State of Texas, of Bexar County

My Commission Expires

January 10, 2004



FOUND 5/8 INCH IRON ROD
W/1-1/2" ALUM. CAP STAMPED "N-06"

POINT OF BEGINNING

FOUND 5/8 INCH
IRON ROD W/1-1/2" ALUM.
CAP STAMPED "N-07"
Y=6981052.46
X=2296379.04
NAD83 Datum SPC Texas North Central Zone 4202

WHITE SETTLEMENT RD.

C.O.E. MON.
NO. 94 FND.

S89°41'41"E
542.10'

490.19'
S00°01'04"E

S70°10'12"E 70.05'

S25°52'47"E 149.33'

S81°19'23"E 2337.25' TO C.O.E. MON. NO. 100

J.M. LEONARD
VOL. 4211, PG. 402
D.R.T.C.T.

FOUND 5/8 INCH
IRON ROD W/1-1/2" ALUM. CAP STAMPED "N-05"

486.01'

S86°33'51"W

S50°58'58"W 225.51'

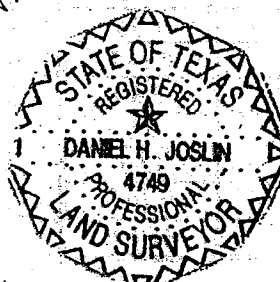
N08°41'58"W 82.52'

FOUND 5/8 INCH IRON ROD
W/1-1/2" ALUM. CAP STAMPED "N-04"

C.O.E. MON.
NO. 100 FND.

C.O.E. MON.
FND. (DAMAGED)

NOTE:
All property corners are 5/8 inch capped
iron rods (BHB INC) unless otherwise noted.



SCALE 1" = 500'

I, Daniel H. Joslin, a Registered Professional Land Surveyor, of the State of Texas, do hereby state to the best of my knowledge and belief that the above survey is an accurate delineation of field survey and office computations performed by me or under my supervision, and that all property corners shall be marked on the ground as indicated. Reference bearing basis per USCGS monuments ELEC and RUN using NAD83 datum.

Daniel H. Joslin
R.P.L.S. No. 4749
Date: July 19, 2000

Baird, Hampton & Brown, Inc.
Engineering & Surveying
W. 7th St., Ste. 500 Ft. Worth, TX 76102 Tel:(817)338-1277 Fax:(817)338-9245 E-Mail:mail@bhbinc.com

DRAWN BY:	DHJ
CHECKED BY:	BHB
BHB PROJECT:	2000.006.031
DATE:	JULY 19, 2000

**PROPERTY DESCRIPTION
LANDFILL AREA 4**

Being a tract of land located in the J. M. Shreeve Survey, A-1456, Tarrant County, Texas. Said tract being a portion of Carswell Air Force Base previously surveyed by T.D. Disheroon in October of 1976 and revised in October of 1978 of which survey is filed with the Corp of Engineers, Fort Worth Division, said tract also being a portion of the NAS Fort Worth JRB Overall Area per plat of survey called boundary resurvey of a tract known as NAS Fort Worth JRB (AKA Carswell Air Force Base) Tarrant County, Texas prepared by Baird, Hampton & Brown, Inc., Fort Worth, Texas, dated January 14, 1998 filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract being more particularly described by metes and bounds as follows:

BEGINNING at a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-07" (Y=6961052.46, X=2296379.04, NAD83 datum SPC Texas North Central Zone 4202) from which a Corp of Engineer Brass Monument Number 100 bears South 81 degrees 19 minutes 23 seconds East, a distance of 2337.25 feet, said brass monument as shown on the above mentioned surveys;

THENCE South 00 degrees 01 minutes 04 seconds East, a distance of 490.19 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 70 degrees 10 minutes 12 seconds East, a distance of 70.05 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 25 degrees 52 minutes 47 seconds East, a distance of 149.33 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 50 degrees 58 minutes 58 minutes West, a distance of 225.51 feet to a set 5/8 inch capped iron rod (BHB INC);

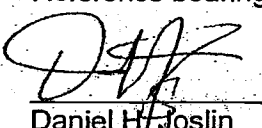
THENCE North 08 degrees 41 minutes 58 seconds West, a distance of 82.52 feet to a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-05";

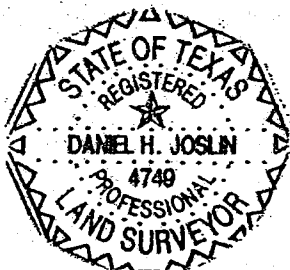
THENCE South 86 degrees 33 minutes 51 seconds West, a distance of 486.01 feet to a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-04";

THENCE North 00 degrees 02 minutes 17 seconds West, a distance of 740.72 feet to a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-08";

THENCE South 89 degrees 41 minutes 41 seconds East, a distance of 542.10 feet to the **POINT OF BEGINNING** and containing 416,232 square feet or 9.555 acres of land.

Reference bearing basis per USCGS Monument ELEC and USCGS Monument RUN using NAD 83 datum.


Daniel H. Joslin
R.P.L.S. No. 4749
Dated: July 19, 2000



Robert J. Huston, *Chairman*
 R. B. "Ralph" Marquez, *Commissioner*
 John M. Baker, *Commissioner*
 Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

March 5, 2001

Mr. Charles Pringle
 Team Chief/BEC
 HQ-AFCEE/ERB
 3207 North Road, B-532
 Brooks AFB, TX 78235-5363

LF 5:4, 5, 8 & WR (AF)
 - WR-07 under
 RR 2

Re: Carswell Air Force Base
 TNRCC Solid Waste Registration No. 65004
 Hazardous Waste Permit No. HW-50289
Review of Draft RFI for SWMUs 22, 23, 24 and 25
 Approval - Risk Reduction Standard No. 2 - Soil

Dear Mr. Pringle:

The Texas Natural Resource Conservation Commission (TNRCC) has completed the review of the *Draft RCRA Facility Investigation Solid Waste Management Units 22, 23, 24 and 25 NAS Fort Worth JRB, Texas Volumes I and II* (RFI Report) dated September 2000 and received by the TNRCC on September 14, 2000. The TNRCC also reviewed comments received from EPA Region 6 dated November 9, 2000. Solid Waste Management Units (SWMUs) 22, 23, 24 and 25 are identified in the RFI Report as four former landfills comprising approximately 22.75 acres and active for various periods of time from 1956 to 1975. The landfills reportedly received various quantities of domestic waste, construction debris, medical waste and flightline area waste. The RFI Report indicates that SWMU 24 received drums of cleaning solvents, tetraethyl lead sludge, small quantities of undetermined waste, and may have received live ordinance.

The RFI Report contains documentation indicating that closure of contaminated soil associated with SWMUs 22, 23, 24 and 25 have attained closure under 30 TAC §335.555 RRS No. 2 Closure/Remediation to Health-Based Standards and Criteria, such that no post-closure care or engineering or institutional control measures are required. Ground water contamination detected by monitoring wells installed as part of this RFI appears to be associated with a regional chlorinated solvent plume emanating from Air Force Plant (AFP) 4. AFP 4 has been listed on the National Priority List (NPL), a.k.a Superfund, and ground water contamination associated with releases from AFP 4 is being addressed via a Superfund Record of Decision (ROD) signed in 1996.

Therefore, based upon the information contained in the RFI Report and other information available to staff, it appears that the closure of contaminated soil associated with SWMUs 22, 23, 24 and 25

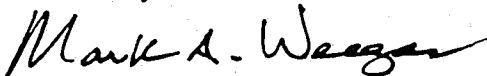
Mr. Charles Pringle
Page 2
March 5, 2001

has attained closure/remediation to RRS No. 2. As specified in §335.560, AFBCA must submit proof of deed certification to the TNRCC within ninety (90) days from the date of this letter. Upon acceptance of the proof of deed certification, the TNRCC will transmit a final letter releasing AFBCA from post-closure care responsibilities for contaminated soil associated with SWMUs 22, 23, 24 and 25.

Please be aware that it is the continuing obligation of persons associated with a site to assure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the actual closure fails to comply with these requirements, the burden remains upon AFBCA to take any necessary and authorized action to correct such conditions. A TNRCC field inspector may review your RFI Report and conduct a closure inspection of the site.

Questions concerning this letter should be directed to me at (512) 239-2360 or via e-mail: mweegar@tnrcc.state.tx.us. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TNRCC Region 4 Office in Arlington. The TNRCC Solid Waste Registration Number and Unit Name should be referenced in all submittals.

Sincerely,



Mark A. Weegar, Project Manager
Team II, Corrective Action Section
Remediation Division
Texas Natural Resource Conservation Commission

MW:mw

cc: Mr. Alvin Brown, AFBCA/ROL, Austin, TX
Mr. Gary Miller, U.S. EPA Region 6, Dallas, TX.(6PD-NB)
Mr. Tim Sewell, TNRCC Region 4 - Arlington (MC-R4)
Ms. Luda Voskov, TNRCC Superfund Cleanup Section (MC-143)
Mr. Jerry Allred, TNRCC MSW Permits Section (MC-124)



TEXAS WATER COMMISSION
Stephen F. Austin State Office Building
Austin, Texas

**PERMIT FOR MUNICIPAL
HAZARDOUS WASTE MANAGEMENT SITE**
Issued under provisions of TEX.
HEALTH & SAFETY CODE ANN.
Chapter 361 (Vernon)

Name of Permittee:

U.S. Air Force/Carswell Air Force Base
7CSG/CC Carswell AFB
Fort Worth, Texas 76127-5000

Site Owner:

United States Department of the Air Force
7CSG/CC Carswell AFB
Fort Worth, Texas 76127-5000

Classification of Site:

Class I Hazardous Waste Storage,
Off-site, Non-commercial

The permittee is authorized to store and process wastes in accordance with the limitations, requirements, and other conditions set forth herein. This permit is granted subject to Texas Water Commission (TWC) rules, other Orders of the TWC, and laws of the State of Texas. Nothing in this permit exempts the permittee from compliance with the applicable rules and regulations of the Texas Air Control Board (TACB).

This permit will be valid until cancelled, amended, or revoked by the Commission, except that the authorization to store and process wastes shall expire midnight, 10 years after the date of permit approval.

All provisions in this permit stem from both State and Federal authority. The provisions marked with an asterisk (*) stem from Federal authority and will implement the applicable requirements of HSWA not presently authorized to the State of Texas.

APPROVED, ISSUED, AND EFFECTIVE this 7th day of February, 1991

ATTEST:

Maurice A. Vargney

[Signature]
For the Commission

CIV
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TEXAS WATER COMMISSION



B. J. Wynne, III, Chairman
 John E. Birdwell, Commissioner
 Cliff Johnson, Commissioner

John J. Vay, General Counsel
 Michael E. Field, Chief Hearings Examiner
 Brenda W. Foster, Chief Clerk

February 13, 1991

Allen Beinke, Executive Director

Dear Permittee: RE: U.S. DEPT OF AIR FORCE - CARSWELL, AFB; Permit HW50289

Enclosed is a copy of:

() 1. Permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code. In order that you may comply with monitoring requirements of your permit, self-reporting forms and instructions will be forwarded to you from the Water Quality Division at an early date. If your facility is not yet operating, please use the attached Notification of Completion of Facilities form to advise this agency and our district office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.

() 2. Amended permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code. Please continue using the self-reporting forms you have on hand until new forms are forwarded by the Water Quality Division. If your facility is not yet operating, please use the attached Notification of Completion of Facilities form to advise this agency and our district office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.

() 3. Renewal of a permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code. If your facility is not yet operating, please use the attached Notification of Completion of Facilities form to advise this agency and our district office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.

(✓) 4. Permit for a hazardous or solid waste facility issued pursuant to Art. 4477-7, Texas Revised Civil Statutes. Your attention is directed to Commission Rule 335.5 which may be applicable to your facility.

() 5. Permit or amended permit for a waste disposal well or an injection well issued pursuant to Chapter 27 of the Texas Water Code. In accordance with the Texas Water Code, you must file a copy of the permit with the city and county health authorities.

If there are any questions concerning this permit, please let us know.

Gloria A. Vasquez

Gloria A. Vasquez, Chief Clerk
 cc w/enclosures:

All Parties
 TWC District Office 4

15 FEB 1991

Robert J. Huston, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Jeffrey A. Saitas, *Executive Director*



703 1

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

September 14, 2001

Mr. Charles Pringle
Team Chief/BEC
HQ-AFCEE/ERB
3207 North Road, B-532
Brooks AFB, TX 78235-5363

Re: Closure/Remediation - Risk Reduction Standard No. 2 - Soil Only
Acceptance of Deed Certification and Release From Post-closure Care Responsibilities
Carswell Air Force Base
TNRCC Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
SWMU 22, Landfill Area 4

Dear Mr. Pringle:

The Texas Natural Resource Conservation Commission (TNRCC) received a letter dated May 30, 2001 submitted by the Air Force Base Conversion Agency (AFBCA) containing proof of deed certification for Solid Waste Management Unit (SWMU) 22, Landfill Area 4. The certification states that contaminants remaining at the site have been remediated to meet non-residential (i.e. industrial/commercial) soil criteria under Risk Reduction Standard (RRS) No. 2 pursuant to Title 30 Texas Administrative Code (TAC) Chapter 335 Subchapters A and S.

In order to attain RRS No. 2, all industrial solid waste and municipal hazardous waste and waste residues must be removed or decontaminated to health based standards and criteria. Contaminants allowed to remain in place in media of concern (i.e., soil, ground water, surface water and air) must not exceed the health based clean up levels as specified in 30 TAC §335.556. A Final Report, documenting that remediation at the facility has attained RRS No. 2 such that no post-closure care or engineering control measures are required, was previously accepted by the TNRCC in our letter dated March 5, 2001. Ground water contamination detected by monitoring wells installed as part of the SWMU 22 investigation appears to be associated with a regional chlorinated solvent plume emanating from Air Force Plant (AFP) 4. AFP 4 has been listed on the National Priority List (NPL), a.k.a Superfund, and ground water contamination associated with releases from AFP 4 is being addressed via a Superfund Record of Decision (ROD) signed in 1996.

After review of the proof of deed certification, it appears that the deed certification requirements of 30 TAC §335 560(b) and (c) have been completed. The TNRCC's Corrective Action Section hereby releases AFBCA from post-closure care responsibilities associated with contamination for SWMU 22.

Mr. Charles Pringle
Page 2
September 14, 2001

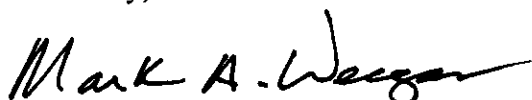
At any time after receipt of this letter, AFBCA may choose to submit an application to the TNRCC's Industrial and Hazardous Waste Permits Section at Mail Code MC-130 requesting to modify the referenced permit to show a change in the corrective action status of SWMUs listed in Section VIII. RCRA Facility Investigation.

If applicable, please submit a request in writing, to update your Notice of Registration (NOR) to the TNRCC Registration and Reporting Section at Mail Code MC-129 with a copy of this letter as an attachment.

Please be aware that it is the continuing obligation of persons associated with a site to assure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the actual remediation fails to comply with these requirements, the burden remains upon (AFBCA) to take any necessary and authorized action to correct such conditions. A TNRCC field inspector may review your Final Report and conduct a closure inspection of the site.

Questions concerning this letter should be directed to me at (512) 239-2360. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TNRCC Region 4 Office in Arlington. The TNRCC Solid Waste Registration Number and Unit Name should be referenced in all submittals.

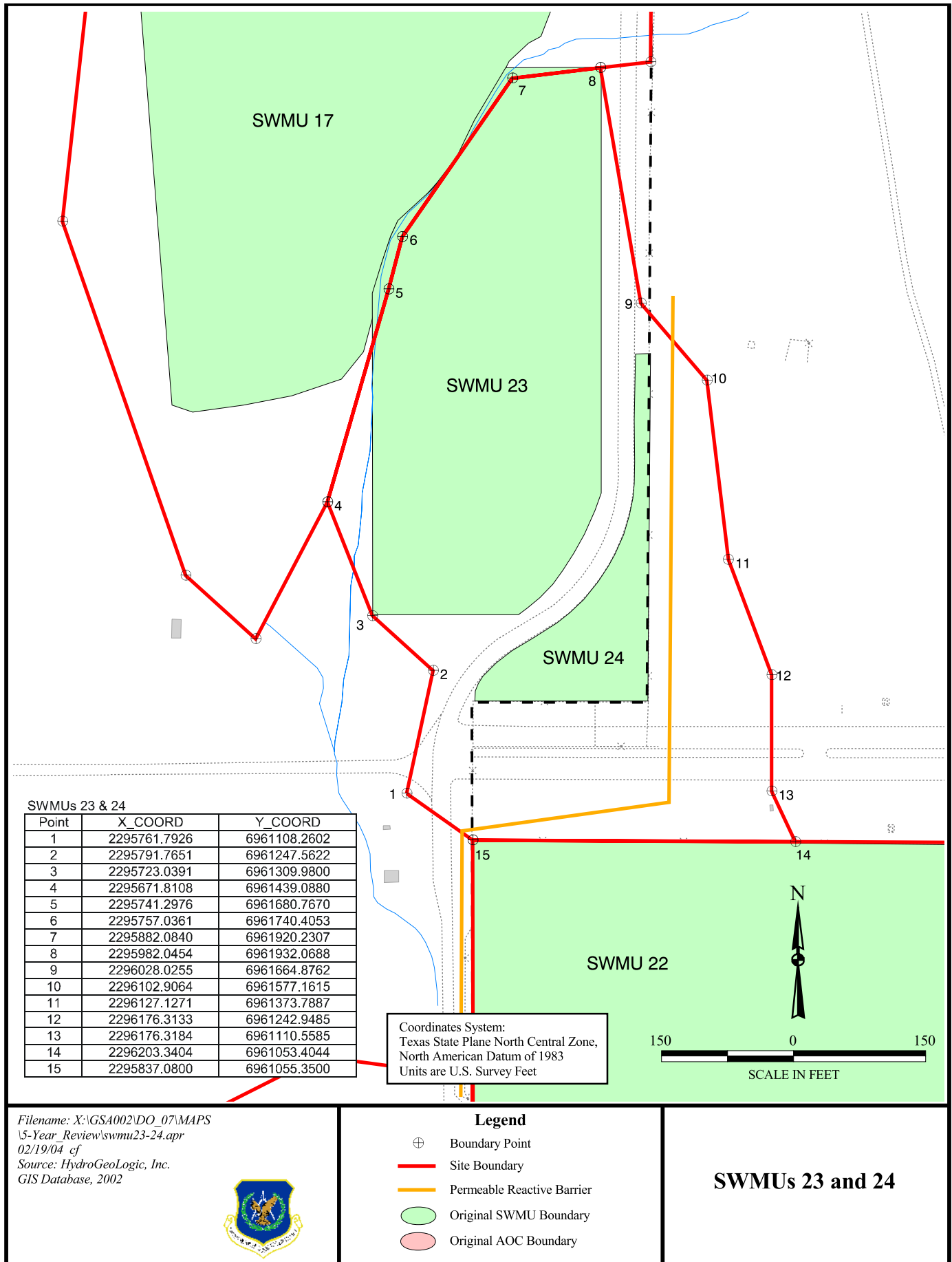
Sincerely,



Mark A. Weegar, Project Manager
Team II, Corrective Action Section
Remediation Division
Texas Natural Resource Conservation Commission

MW/mw

cc: Mr. Gary Miller, U.S. EPA Region 6, Dallas, TX.(6PD-NB)
Mr. Tim Sewell, TNRCC Region 4 - Arlington (MC-R4)



SWMU 23



Photo of SWMU 23 looking north (year unknown).

SWMU 24



Excavation of drums discovered at SWMU 24 using geophysical methods (2000).

31
STATE OF TEXAS
TARRANT COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
SWMU 23 / LANDFILL AREA 5 AND SWMU 24 / WASTE BURIAL AREA 7

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission (TNRCC) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Tarrant County, Texas in compliance with the recordation requirements of said rules:

I

The Department of the Air Force has performed a remediation of the land described herein. A copy of the Notice of Registration No. 65004, including a description of the facility, is attached hereto and is made part of this filing. A list of the known waste constituents, including known concentrations in soil, which have been left in place is attached hereto and is made part of this filing. Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 65004 files, which are available for inspection upon request at the central office of the TNRCC in Austin, Texas.

The TNRCC derives its authority to review the remediation of this tract of land from the Texas Solid Waste Disposal Act, § 361.002, Texas Health and Safety Code, Chapter 361, which enables the TNRCC to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to the Texas Water Code, § 5.012 and § 5.013, Texas Water Code, Annotated, Chapter 5, the TNRCC is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the TNRCC requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the TNRCC of the suitability of this land for any purpose, nor does it constitute any guarantee by the TNRCC that the remediation standards specified in this certification have been met by the Department of the Air Force.

II

Being a tract of land located in the J. M. Shreeve Survey, A-1456, Tarrant County, Texas. Said tract being a portion of Carswell Air Force Base previously surveyed by T.D. Disheroon in October of 1976 and revised in October of 1978 of which survey is filed with the Corp of Engineers, Fort Worth Division, said tract also being a portion of the NAS Fort Worth JRB Overall Area per plat of survey called boundary resurvey of a tract known as NAS Fort Worth JRB (AKA Carswell Air Force Base) Tarrant County, Texas prepared by Baird, Hampton & Brown, Inc., Fort Worth, Texas, dated January 14, 1998 filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract being more particularly described by metes and bounds as follows:

Beginning at a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-08" (Y=6961055.35, X=2295837.08, NAD83 datum SPC Texas North Central Zone 4202); thence North 54 degrees 54 minutes 05 seconds West, a distance of 92.02 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 12 degrees 08 minutes 34 seconds East, a distance of 142.49 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 47 degrees 45 minutes 14 seconds West, a distance of 92.84 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 21 degrees 38 minutes 33 minutes West, a distance of 138.90 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 16 degrees 02 minutes 27 seconds East, a distance of 251.47 feet to an "+" mark on top of a 3" x 3" monitoring well tubing; thence North 14 degrees 47 minutes 00 seconds East, a distance of 61.68 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 34 degrees 48 minutes 51 seconds East, a distance of 219.03 feet to an "+" mark on top of a 3" x 3" monitoring well tubing; thence North 83 degrees 14 minutes 46 seconds East, a distance of 100.66 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 09 degrees 45 minutes 51 seconds East, a distance of 271.12 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 40 degrees 29 minutes 13 minutes East, a distance of 115.33 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 06 degrees 47 minutes 30 seconds East, a distance of 204.81 feet to set 5/8 inch capped iron rod (BHB INC); thence South 20 degrees 36 minutes 09 seconds East, a distance of 139.78 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 00 degrees 00 minutes 08 seconds East, a distance of 132.39 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 25 degrees 18 minutes 16 minutes East, a distance of 63.22 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 89 degrees 41 minutes 44 seconds West, a distance of 366.27 feet to the point of beginning and containing 299,528 square feet or 6.876 acres of land. Reference bearing basis per USCGS Monument ELEC and USCGS Monument RUN using NAD 83 datum.

Lead-contaminated soil and cadmium-contaminated soil has been remediated to meet non-residential (i.e., industrial/commercial soil criteria), in accordance with a plan designed to meet the TNRCC 's requirements in 31 Texas Administrative Code, §335.555, which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential.

Table 1.1
Maximum Concentrations of Contaminants Left in Place
SWMU 23 / Landfill 5
NAS Fort Worth, JRB

Method	Analyte	Result
SW6010	Arsenic	25.5 F
SW6010	Barium	155
SW6010	Chromium (total)	37.5
SW6010	Cobalt	9.7 F
SW6010	Copper	83.9
SW6010	Iron	118000
SW6010	Molybdenum	16 F
SW6010	Nickel	44.2 F
SW6010	Selenium	6.1 F
SW6010	Silver	0.5 F
SW6010	Thallium	23.2 F
SW6010	Vanadium	57.4
SW6010	Zinc	59.4 J
SW7471	Mercury	0.2 J
SW8260	1,2,4-Trimethylbenzene	0.038
SW8260	1,2-Dichlorobenzene	0.0078
SW8260	1,2-Dichloroethene, cis-	0.018
SW8260	1,3,5-Trimethylbenzene	0.01
SW8260	1,4-Dichlorobenzene	0.12
SW8260	2-Hexanone	0.04
SW8260	Acetone	0.5
SW8260	Chlorobenzene	0.013
SW8260	Ethylbenzene	0.025
SW8260	m- & p-Xylene (sum of	0.057
SW8260	Methyl ethyl ketone	0.14
SW8260	Methyl isobutyl ketone	0.014
SW8260	Methylene chloride	0.005 J
SW8260	Naphthalene	0.014
SW8260	n-Propylbenzene	0.005
SW8260	o-Xylene	0.013
SW8260	Toluene	0.021
SW8270	Benzo(a)anthracene	0.42 F
SW8270	Benzo(a)pyrene	0.95
SW8270	Benzo(b)fluoranthene	1.1
SW8270	Benzo(g,h,i)perylene	0.44 F
SW8270	Benzo(k)fluoranthene	0.8
SW8270	Benzyl butyl phthalate	3.3
SW8270	bis(2-Ethylhexyl)phthalate	0.37
SW8270	Chrysene	1.3
SW8270	Fluoranthene	1.3
SW8270	Indeno(1,2,3-c,d)pyrene	0.78
SW8270	Phenanthrene	0.64 F
SW8270	Pyrene	1.1

Table 1.2
Maximum Concentrations of Contaminants Left in Place
SWMU 24 / Waste Pile 7
NAS Fort Worth, JRB

Method	Analyte	Result
SW6010	Arsenic	17.4 F
SW6010	Chromium (total)	18.5 F
SW7421	Lead	59.3
SW6010	Selenium	17.3 F
SW6010	Thallium	27.3 F
SW6010	Zinc	84.3 J
SW7471	Mercury	0.15
SW8260	2-Hexanone	0.009
SW8260	Acetone	0.008
SW8260	Dichlorodifluoromethane	0.007
SW8260	Tetrachloroethene	0.11
SW8260	Trichloroethene	0.22
SW8270	Acenaphthene	0.68
SW8270	Anthracene	1.6
SW8270	Benzo(a)anthracene	0.97
SW8270	Benzo(a)pyrene	1.3
SW8270	Benzo(b)fluoranthene	1.8
SW8270	Benzo(g,h,i)perylene	10 J
SW8270	bis(2-Ethylhexyl)phthalate	0.59
SW8270	Chrysene	1.3
SW8270	Fluoranthene	25 J
SW8270	Fluorene	0.39
SW8270	Indeno(1,2,3-c,d)pyrene	1.1 J
SW8270	Phenanthrene	10 J
SW8270	Pyrene	23 J

In accordance with the requirements for Standard 2 cleanups where the remedy is based upon non-residential soil criteria, the current owner has undertaken actions as necessary to protect human health or the environment in accordance with the rules of the TNRCC.

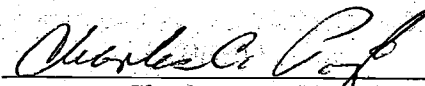
III

STATE OF TEXAS
TARRANT COUNTY

The owner of the site is Department of the Air Force, and its address is Air Force Base Conversion Agency (AFBCA), Headquarters Air Force Center of Environmental Excellence (AFCEE)/Environmental Restoration Branch (ERB), 3207 North Road, Brooks Air Force Base, Texas 78235-5363, where more specific information may be obtained from the Installation Management Officer.

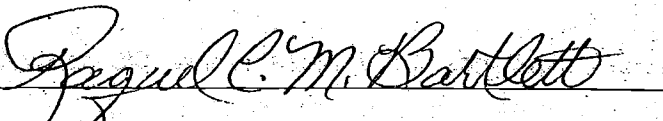
EXECUTED this the 19 day of April, 2001.

Department of the Air Force

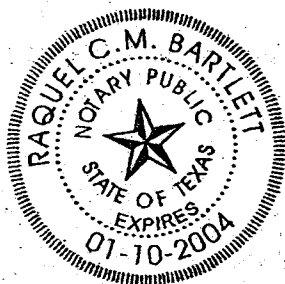

Charles C. Pringle, P. E.
Base Environmental Coordinator

BEFORE ME, on this the 19 day of April 2001, personally appeared Charles C. Pringle, Base Environmental Coordinator, Air Force Base Conversion Agency, United States Air Force, known to me to be the person and agent of said government agency whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 19 day of April, 2001.



Notary Public in and for the State of Texas, of Bexar County



My Commission Expires

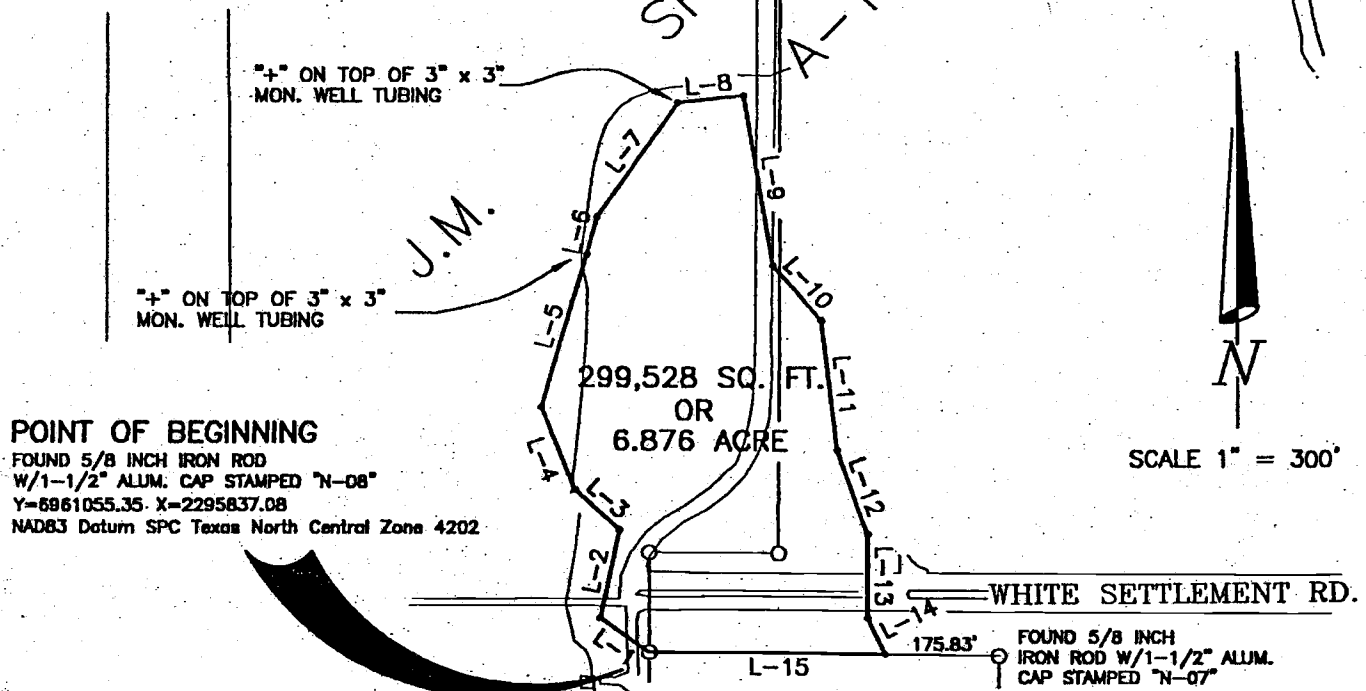
January 10, 2004

DANIEL McVEAN SURVEY, A-1004

NOTE:

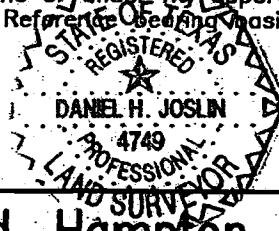
All property corners are 5/8 inch capped iron rods (BHB INC) unless otherwise noted.

NUMBER	DIRECTION	DISTANCE
L-1	N54°54'05"W	92.02'
L-2	N12°08'34"E	142.49'
L-3	N47°45'14"W	92.84'
L-4	N21°38'33"W	138.90'
L-5	N16°02'27"E	251.47'
L-6	N14°47'00"E	61.68'
L-7	N34°48'51"E	219.03'
L-8	N83°14'46"E	100.66'
L-9	S09°45'51"E	271.12'
L-10	S40°29'13"E	115.33'
L-11	S06°47'30"E	204.81'
L-12	S20°36'09"E	139.78'
L-13	S00°00'08"E	132.39'
L-14	S25°18'16"E	63.22'
L-15	N89°41'44"W	366.27'



I, Daniel H. Joslin, a Registered Professional Land Surveyor, of the State of Texas, do hereby state to the best of my knowledge and belief that the above survey is an accurate delineation of field survey and office computations performed by me or under my supervision, and that all property corners shall be marked on the ground as indicated. Reference bearing basis per USCGS monuments ELEC and RUN using NAD83 data.

Daniel H. Joslin
R.P.L.S. No. 4749
Dated: August 17, 2000



Baird, Hampton & Brown, Inc.
Engineering & Surveying

309 W. 7th St., Ste. 500 Ft. Worth, TX 76102 Tel:(817)338-1277 Fax:(817)338-9245 E-Mail:mail@bhbinc.com

DRAWN BY:	DHJ
CHECKED BY:	BHB
BHB PROJECT:	2000.006.031
DATE:	AUGUST 17, 2000

**PROPERTY DESCRIPTION
LANDFILL AREA 5 & WP 7**

Being a tract of land located in the J. M. Shreeve Survey, A-1456, Tarrant County, Texas. Said tract being a portion of Carswell Air Force Base previously surveyed by T.D. Disheroon in October of 1976 and revised in October of 1978 of which survey is filed with the Corp of Engineers, Fort Worth Division, said tract also being a portion of the NAS Fort Worth JRB Overall Area per plat of survey called boundary resurvey of a tract known as NAS Fort Worth JRB (AKA Carswell Air Force Base) Tarrant County, Texas prepared by Baird, Hampton & Brown, Inc., Fort Worth, Texas, dated January 14, 1998 filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract being more particularly described by metes and bounds as follows:

BEGINNING at a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-08" (Y=6961055.35, X=2295837.08, NAD83 datum SPC Texas North Central Zone 4202);

THENCE North 54 degrees 54 minutes 05 seconds West, a distance of 92.02 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 12 degrees 08 minutes 34 seconds East, a distance of 142.49 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 47 degrees 45 minutes 14 seconds West, a distance of 92.84 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 21 degrees 38 minutes 33 minutes West, a distance of 138.90 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 16 degrees 02 minutes 27 seconds East, a distance of 251.47 feet to an "+" mark on top of a 3" x 3" monitoring well tubing;

THENCE North 14 degrees 47 minutes 00 seconds East, a distance of 61.68 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 34 degrees 48 minutes 51 seconds East, a distance of 219.03 feet to an "+" mark on top of a 3" x 3" monitoring well tubing;

THENCE North 83 degrees 14 minutes 46 seconds East, a distance of 100.66 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 09 degrees 45 minutes 51 seconds East, a distance of 271.12 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 40 degrees 29 minutes 13 minutes East, a distance of 115.33 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 06 degrees 47 minutes 30 seconds East, a distance of 204.81 feet to set 5/8 inch capped iron rod (BHB INC);


THENCE South 20 degrees 36 minutes 09 seconds East, a distance of 139.78 feet to a set 5/8 inch capped iron rod (BHB INC);

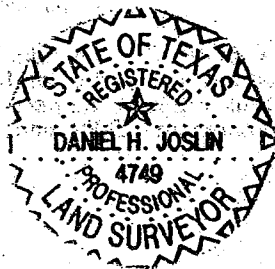
THENCE South 00 degrees 00 minutes 08 seconds East, a distance of 132.39 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 25 degrees 18 minutes 16 minutes East, a distance of 63.22 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 89 degrees 41 minutes 44 seconds West, a distance of 366.27 feet to the POINT OF BEGINNING and containing 299,528 square feet or 6.876 acres of land.

Reference bearing basis per USCGS Monument ELEC and USCGS Monument RUN using NAD 83 datum.


Daniel H. Joslin
R.P.L.S. No. 4749
Dated: August 17, 2000



Robert J. Huston, *Chairman*

R. B. "Ralph" Marquez, *Commissioner*

John M. Baker, *Commissioner*

Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

March 5, 2001

Mr. Charles Pringle
Team Chief/BEC
HQ-AFCEE/ERB
3207 North Road, B-532
Brooks AFB, TX 78235-5363

LF 514, 518 & WRAF)
- WP-07 under
RR 2

Re: Carswell Air Force Base
TNRCC Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
Review of Draft RFI for SWMUs 22, 23, 24 and 25
Approval - Risk Reduction Standard No. 2 - Soil

Dear Mr. Pringle:

The Texas Natural Resource Conservation Commission (TNRCC) has completed the review of the *Draft RCRA Facility Investigation Solid Waste Management Units 22, 23, 24 and 25 NAS Fort Worth JRB, Texas Volumes I and II* (RFI Report) dated September 2000 and received by the TNRCC on September 14, 2000. The TNRCC also reviewed comments received from EPA Region 6 dated November 9, 2000. Solid Waste Management Units (SWMUs) 22, 23, 24 and 25 are identified in the RFI Report as four former landfills comprising approximately 22.75 acres and active for various periods of time from 1956 to 1975. The landfills reportedly received various quantities of domestic waste, construction debris, medical waste and flightline area waste. The RFI Report indicates that SWMU 24 received drums of cleaning solvents, tetraethyl leaded sludge, small quantities of undetermined waste, and may have received live ordinance.

The RFI Report contains documentation indicating that closure of contaminated soil associated with SWMUs 22, 23, 24 and 25 have attained closure under 30 TAC §335.555 RRS No. 2 Closure/Remediation to Health-Based Standards and Criteria, such that no post-closure care or engineering or institutional control measures are required. Ground water contamination detected by monitoring wells installed as part of this RFI appears to be associated with a regional chlorinated solvent plume emanating from Air Force Plant (AFP) 4. AFP 4 has been listed on the National Priority List (NPL), a.k.a Superfund, and ground water contamination associated with releases from AFP 4 is being addressed via a Superfund Record of Decision (ROD) signed in 1996.

Therefore, based upon the information contained in the RFI Report and other information available to staff, it appears that the closure of contaminated soil associated with SWMUs 22, 23, 24 and 25

Mr. Charles Pringle

Page 2

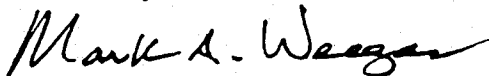
March 5, 2001

has attained closure/remediation to RRS No. 2. As specified in §335.560, AFBCA must submit proof of deed certification to the TNRCC within ninety (90) days from the date of this letter. Upon acceptance of the proof of deed certification, the TNRCC will transmit a final letter releasing AFBCA from post-closure care responsibilities for contaminated soil associated with SWMUs 22, 23, 24 and 25.

Please be aware that it is the continuing obligation of persons associated with a site to assure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the actual closure fails to comply with these requirements, the burden remains upon AFBCA to take any necessary and authorized action to correct such conditions. A TNRCC field inspector may review your RFI Report and conduct a closure inspection of the site.

Questions concerning this letter should be directed to me at (512) 239-2360 or via e-mail: mweegar@tnrcc.state.tx.us. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TNRCC Region 4 Office in Arlington. The TNRCC Solid Waste Registration Number and Unit Name should be referenced in all submittals.

Sincerely,



Mark A. Weegar, Project Manager
Team II, Corrective Action Section
Remediation Division
Texas Natural Resource Conservation Commission

MW:mw

cc: Mr. Alvin Brown, AFBCA/ROL, Austin, TX
Mr. Gary Miller, U.S. EPA Region 6, Dallas, TX.(6PD-NB)
Mr. Tim Sewell, TNRCC Region 4 - Arlington (MC-R4)
Ms. Luda Voskov, TNRCC Superfund Cleanup Section (MC-143)
Mr. Jerry Allred, TNRCC MSW Permits Section (MC-124)



TEXAS WATER COMMISSION
Stephen F. Austin State Office Building
Austin, Texas

**PERMIT FOR MUNICIPAL
HAZARDOUS WASTE MANAGEMENT SITE**
Issued under provisions of TEX.
HEALTH & SAFETY CODE ANN.
Chapter 361 (Vernon)

Name of Permittee:

U.S. Air Force/Carswell Air Force Base
7CSG/CC Carswell AFB
Fort Worth, Texas 76127-5000

Site Owner:

United States Department of the Air Force
7CSG/CC Carswell AFB
Fort Worth, Texas 76127-5000

Classification of Site:

Class I Hazardous Waste Storage, -
Off-site, Non-commercial

The permittee is authorized to store and process wastes in accordance with the limitations, requirements, and other conditions set forth herein. This permit is granted subject to Texas Water Commission (TWC) rules, other Orders of the TWC, and laws of the State of Texas. Nothing in this permit exempts the permittee from compliance with the applicable rules and regulations of the Texas Air Control Board (TACB).

This permit will be valid until cancelled, amended, or revoked by the Commission, except that the authorization to store and process wastes shall expire midnight, 10 years after the date of permit approval.

All provisions in this permit stem from both State and Federal authority. The provisions marked with an asterisk (*) stem from Federal authority and will implement the applicable requirements of HSWA not presently authorized to the State of Texas.

APPROVED, ISSUED, AND EFFECTIVE this 7th day of February, 1991

ATTEST:

Norman R. Vargnes

For the Commission

TEXAS WATER COMMISSION



B. J. Wynne, III, Chairman
 John E. Birdwell, Commissioner
 Cliff Johnson, Commissioner

John J. Vay, General Counsel
 Michael E. Field, Chief Hearings Examiner
 Brenda W. Foster, Chief Clerk

February 13, 1991

Allen Beinke, Executive Director

Dear Permittee: RE: U.S. DEPT OF AIR FORCE - CARSWELL, AFB; Permit HW50289

Enclosed is a copy of:

() 1. Permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code. In order that you may comply with monitoring requirements of your permit, self-reporting forms and instructions will be forwarded to you from the Water Quality Division at an early date. If your facility is not yet operating, please use the attached Notification of Completion of Facilities form to advise this agency and our district office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.

() 2. Amended permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code. Please continue using the self-reporting forms you have on hand until new forms are forwarded by the Water Quality Division. If your facility is not yet operating, please use the attached Notification of Completion of Facilities form to advise this agency and our district office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.

() 3. Renewal of a permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code. If your facility is not yet operating, please use the attached Notification of Completion of Facilities form to advise this agency and our district office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.

(✓) 4. Permit for a hazardous or solid waste facility issued pursuant to Art. 4477-7, Texas Revised Civil Statutes. Your attention is directed to Commission Rule 335.5 which may be applicable to your facility.

() 5. Permit or amended permit for a waste disposal well or an injection well issued pursuant to Chapter 27 of the Texas Water Code. In accordance with the Texas Water Code, you must file a copy of the permit with the city and county health authorities.

If there are any questions concerning this permit, please let us know.

Gloria A. Vasquez

Gloria A. Vasquez, Chief Clerk
 cc w/enclosures:

All Parties

TWC District Office 4

15 FEB 1991

Robert J. Huston, *Chairman*
R B "Ralph" Marquez, *Commissioner*
John M Baker, *Commissioner*
Jeffrey A Saitas, *Executive Director*



702 1

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

September 14, 2001

Mr. Charles Pringle
Team Chief/BEC
HQ-AFCEE/ERB
3207 North Road, B-532
Brooks AFB, TX 78235-5363

Re: Closure/Remediation - Risk Reduction Standard No. 2 - Soil Only
Acceptance of Deed Certification and Release From Post-closure Care Responsibilities
Carswell Air Force Base
TNRCC Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
SWMU 23 (Landfill 5) and SWMU 24 (Waste Burial Area 7)

Dear Mr. Pringle.

The Texas Natural Resource Conservation Commission (TNRCC) received a letter dated May 30, 2001 submitted by the Air Force Base Conversion Agency (AFBCA) containing proof of deed certification for Solid Waste Management Unit (SWMU) 23, Landfill Area 5, and SWMU 24, Waste Burial Area 7. The certification states that contaminants remaining at the site have been remediated to meet non-residential (i.e. industrial/commercial) soil criteria under Risk Reduction Standard (RRS) No. 2 pursuant to Title 30 Texas Administrative Code (TAC) Chapter 335 Subchapters A and S.

In order to attain RRS No. 2, all industrial solid waste and municipal hazardous waste and waste residues must be removed or decontaminated to health based standards and criteria. Contaminants allowed to remain in place in media of concern (i.e., soil, ground water, surface water and air) must not exceed the health based clean up levels as specified in 30 TAC §335.556. A Final Report, documenting that remediation at the facility has attained RRS No. 2 such that no post-closure care or engineering control measures are required, was previously accepted by the TNRCC in our letter dated March 5, 2001. Ground water contamination detected by monitoring wells installed as part of the SWMU 23 and SWMU 24 investigation appears to be associated with a regional chlorinated solvent plume emanating from Air Force Plant (AFP) 4. AFP 4 has been listed on the National Priority List (NPL), a.k.a Superfund, and ground water contamination associated with releases from AFP 4 is being addressed via a Superfund Record of Decision (ROD) signed in 1996.

After review of the proof of deed certification, it appears that the deed certification requirements of 30 TAC §335.560(b) and (c) have been completed. The TNRCC's Corrective Action Section hereby

Mr. Charles Pringle
Page 2
September 14, 2001

releases AFBCA from post-closure care responsibilities associated with contamination for SWMU 23 and SWMU 24.

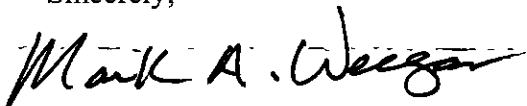
At any time after receipt of this letter, AFBCA may choose to submit an application to the TNRCC's Industrial and Hazardous Waste Permits Section at Mail Code MC-130 requesting to modify the referenced permit to show a change in the corrective action status of SWMUs listed in Section VIII. RCRA Facility Investigation.

If applicable, please submit a request in writing, to update your Notice of Registration (NOR) to the TNRCC Registration and Reporting Section at Mail Code MC-129 with a copy of this letter as an attachment.

Please be aware that it is the continuing obligation of persons associated with a site to assure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the actual remediation fails to comply with these requirements, the burden remains upon AFBCA to take any necessary and authorized action to correct such conditions. A TNRCC field inspector may review your Final Report and conduct a closure inspection of the site.

Questions concerning this letter should be directed to me at (512) 239-2360. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TNRCC Region 4 Office in Arlington. The TNRCC Solid Waste Registration Number and Unit Name should be referenced in all submittals.

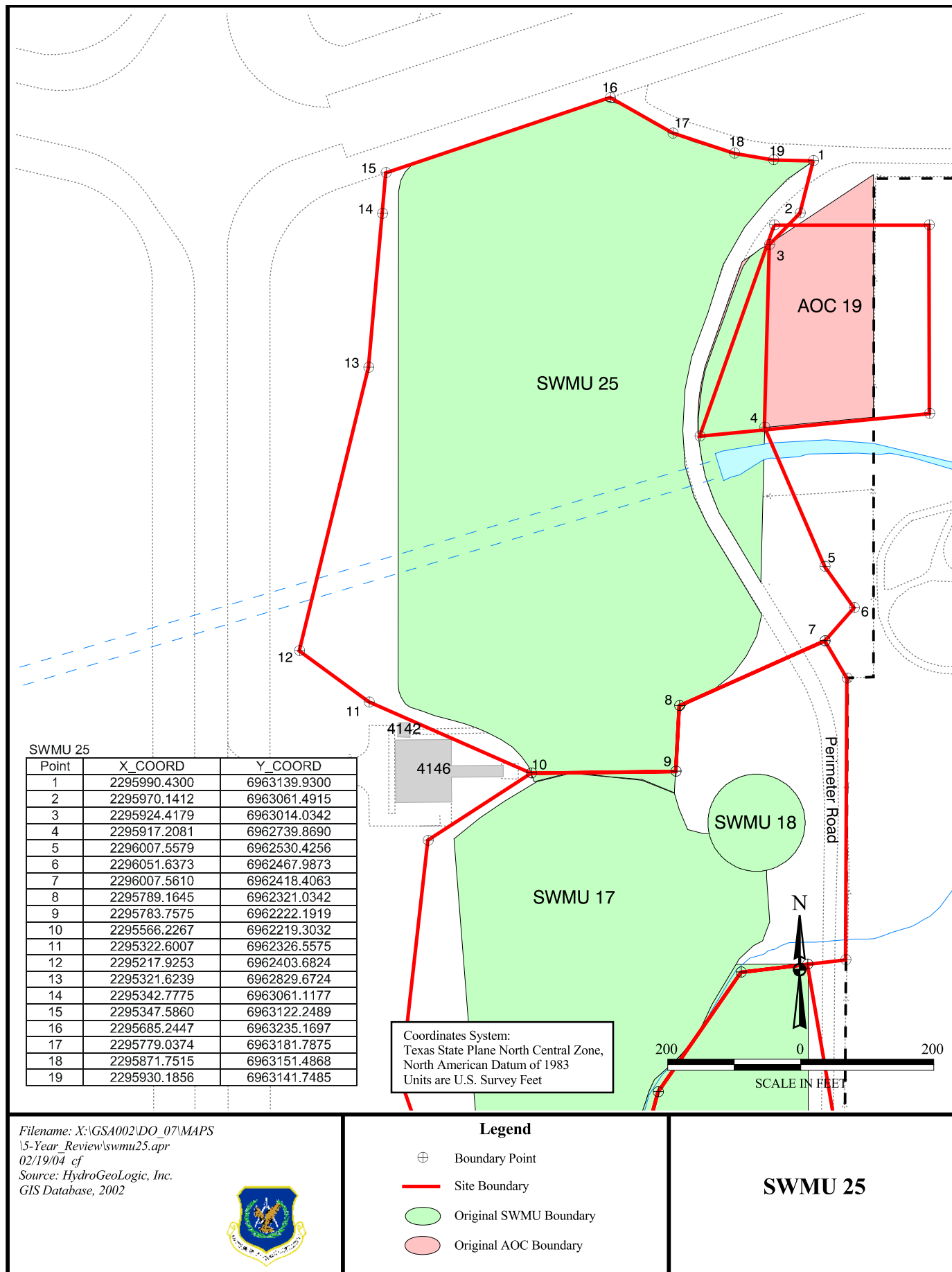
Sincerely,



Mark A. Weegar, Project Manager
Team II, Corrective Action Section
Remediation Division
Texas Natural Resource Conservation Commission

MW/mw

cc: Mr. Gary Miller, U.S. EPA Region 6, Dallas, TX.(6PD-NB)
Mr. Tim Sewell, TNRCC Region 4 - Arlington (MC-R4)



SWMU 25



Photo of SWMU 25 looking southwest (2004).



Photo of SWMU 25 looking west across the site (2004).

STATE OF TEXAS
TARRANT COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION
SWMU 25 / LANDFILL AREA 8

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission (TNRCC) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Tarrant County, Texas in compliance with the recordation requirements of said rules:

I

The Department of the Air Force has performed a remediation of the land described herein. A copy of the Notice of Registration No. 65004, including a description of the facility, is attached hereto and is made part of this filing. A list of the known waste constituents, including known concentrations in soil, which have been left in place is attached hereto and is made part of this filing. Further information concerning this matter may be found by an examination of company records or in the Notice of Registration No. 65004 files, which are available for inspection upon request at the central office of the TNRCC in Austin, Texas.

The TNRCC derives its authority to review the remediation of this tract of land from the Texas Solid Waste Disposal Act, § 361.002, Texas Health and Safety Code, Chapter 361, which enables the TNRCC to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to the Texas Water Code, § 5.012 and § 5.013, Texas Water Code, Annotated, Chapter 5, the TNRCC is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the TNRCC requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the TNRCC of the suitability of this land for any purpose, nor does it constitute any guarantee by the TNRCC that the remediation standards specified in this certification have been met by the Department of the Air Force.

II

Being a tract of land located in the J. M. Shreeve Survey, A-1456 and the Daniel McVean Survey, A-1004, Tarrant County, Texas. Said tract being a portion of Carswell Air Force Base previously surveyed by T.D. Disheroon in October of 1976 and revised in October of 1978 of which survey is filed with the Corp of Engineers, Fort Worth Division, said tract also being a portion of the NAS Fort Worth JRB Overall Area per plat of survey called boundary resurvey of a tract known as NAS Fort Worth JRB (AKA Carswell Air Force Base) Tarrant County, Texas prepared by Baird, Hampton & Brown, Inc., Fort Worth, Texas, dated January 14, 1998 filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract being more particularly described by metes and bounds as follows:

Beginning at a set PK nail on the edge of an asphalt road (Y=6963139.93, X=2295990.43, NAD83 datum SPC Texas North Central Zone 4202), from said set PK nail a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-13" bears South 74 degrees 32 minutes 24 seconds East, a distance of 95.75 feet; thence South 14 degrees 30 minutes 08 seconds West, a distance of 81.02 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 43 degrees 56 minutes 02 seconds West, a distance of 65.90 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 01 degrees 30 minutes 23 seconds West, a distance of 274.26 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 23 degrees 20 minutes 04 minutes East, a distance of 228.10 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 35 degrees 13 minutes 15 seconds East, a distance of 76.43 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 41 degrees 38 minutes 11 seconds West, a distance of 66.34 feet to a set 5/8 inch capped iron rod (BHB INC), from said set 5/8 inch capped iron rod (BHB INC) a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-12" bears South 52 degrees 57 minutes 10 seconds East, a distance of 91.38 feet; thence South 65 degrees 58 minutes 13 seconds West, a distance of 239.12 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 03 degrees 07 minutes 52 seconds West, a distance of 98.99 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 89 degrees 14 minutes 21 seconds West, a distance of 217.55 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 66 degrees 14 minutes 20 minutes West, a distance of 266.19 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 53 degrees 37 minutes 02 seconds West, a distance of 130.02 feet to set 5/8 inch capped iron rod (BHB INC); thence North 13 degrees 40 minutes 53 seconds East, a distance of 438.43 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 05 degrees 13 minutes 20 seconds East, a distance of 232.41 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 04 degrees 29 minutes 51 minutes East, a distance of 61.32 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 71 degrees 30 minutes 32 seconds East, a distance of 356.04 feet to a set PK Nail; thence South 60 degrees 21 minutes 13 seconds East, a distance of 107.92 feet to a set 5/8 inch capped iron rod (BHB INC); thence South 71 degrees 54 minutes 06 minutes East, a distance of 97.54 feet to a set 60D Nail; thence South 80 degrees 32 minutes 18 seconds East, a distance of 59.24 feet to a set 60D Nail; thence South 88 degrees 17 minutes 27 minutes East, a distance of 60.28 feet to the point of beginning and containing 593,244 square feet or 13.619 acres of land. Reference bearing basis per USCGS Monument ELEC and USCGS Monument RUN using NAD 83 datum.

Barium-, cadmium-, and lead-contaminated soil has been remediated to meet non-residential (i.e., industrial/commercial soil criteria), in accordance with a plan designed to meet the TNRCC's requirements in 31 Texas Administrative Code, §335.555, which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential.

In accordance with the requirements for Standard 2 cleanups where the remedy is based upon non-residential soil criteria, the current owner has undertaken actions as necessary to protect human health or the environment in accordance with the rules of the TNRCC.

Table 1.1
Maximum Concentrations of Contaminants Left in Place
SWMU 25 / Landfill 8
NAS Fort Worth, JRB

Method	Analyte	Result
SW6010	Arsenic	23.6 F
SW6010	Barium	669
SW6010	Beryllium	1.3
SW6010	Cadmium	0.57
SW6010	Calcium	323000
SW6010	Chromium (total)	27.2
SW6010	Cobalt	6.8 F
SW7421	Lead	69.2 J
SW6010	Manganese	519 J
SW6010	Potassium	1950 J
SW6010	Potassium	1820 J
SW6010	Selenium	19.4 F
SW6010	Thallium	36.3 F
SW6010	Vanadium	45.3 J
SW6010	Zinc	43.7 J
SW7471	Mercury	0.12
SW7761	Silver	0.27
SW8260	1,2-Dichloroethene, cis-	0.008
SW8260	2-Hexanone	0.006 J
SW8260	Acetone	0.19
SW8260	Methyl ethyl ketone	0.045
SW8260	Methylene chloride	0.007
SW8260	Tetrachloroethene	0.007
SW8260	Toluene	0.027
SW8260	Trichloroethene	0.052
SW8270	Acenaphthene	2.5
SW8270	Anthracene	5.4
SW8270	Benzo(a)anthracene	40 J
SW8270	Benzo(b)fluoranthene	51 J
SW8270	Benzo(g,h,i)perylene	37 J
SW8270	Benzo(k)fluoranthene	31 J
SW8270	bis(2-Ethylhexyl)phthalate	3.3
SW8270	Chrysene	46 J
SW8270	Dibenzo(a,h)anthracene	4.6 J
SW8270	Fluoranthene	81 J
SW8270	Fluorene	1.5
SW8270	Indeno(1,2,3-c,d)pyrene	45 J
SW8270	Phenanthrene	43 J
SW8270	Pyrene	110 J
SW9030	Sulfide	73.9

III

STATE OF TEXAS
TARRANT COUNTY

The owner of the site is Department of the Air Force, and its address is Air Force Base Conversion Agency (AFBCA), Headquarters Air Force Center of Environmental Excellence (AFCEE)/Environmental Restoration Branch (ERB), 3207 North Road, Brooks Air Force Base, Texas 78235-5363, where more specific information may be obtained from the Regional Site Manager

EXECUTED this the 19 day of April, 2001.

Department of the Air Force

Charles C. Pringle
Charles C. Pringle, P. E.
Base Environmental Coordinator

BEFORE ME, on this the 19 day of April 2001, personally appeared Charles C. Pringle, Base Environmental Coordinator, Air Force Base Conversion Agency, United States Air Force, known to me to be the person and agent of said government agency whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

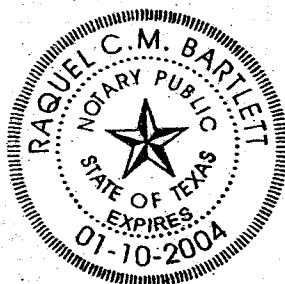
GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 19 day of April, 2001.

Raquel C. M. Bartlett

Notary Public in and for the State of Texas, of Bexar County

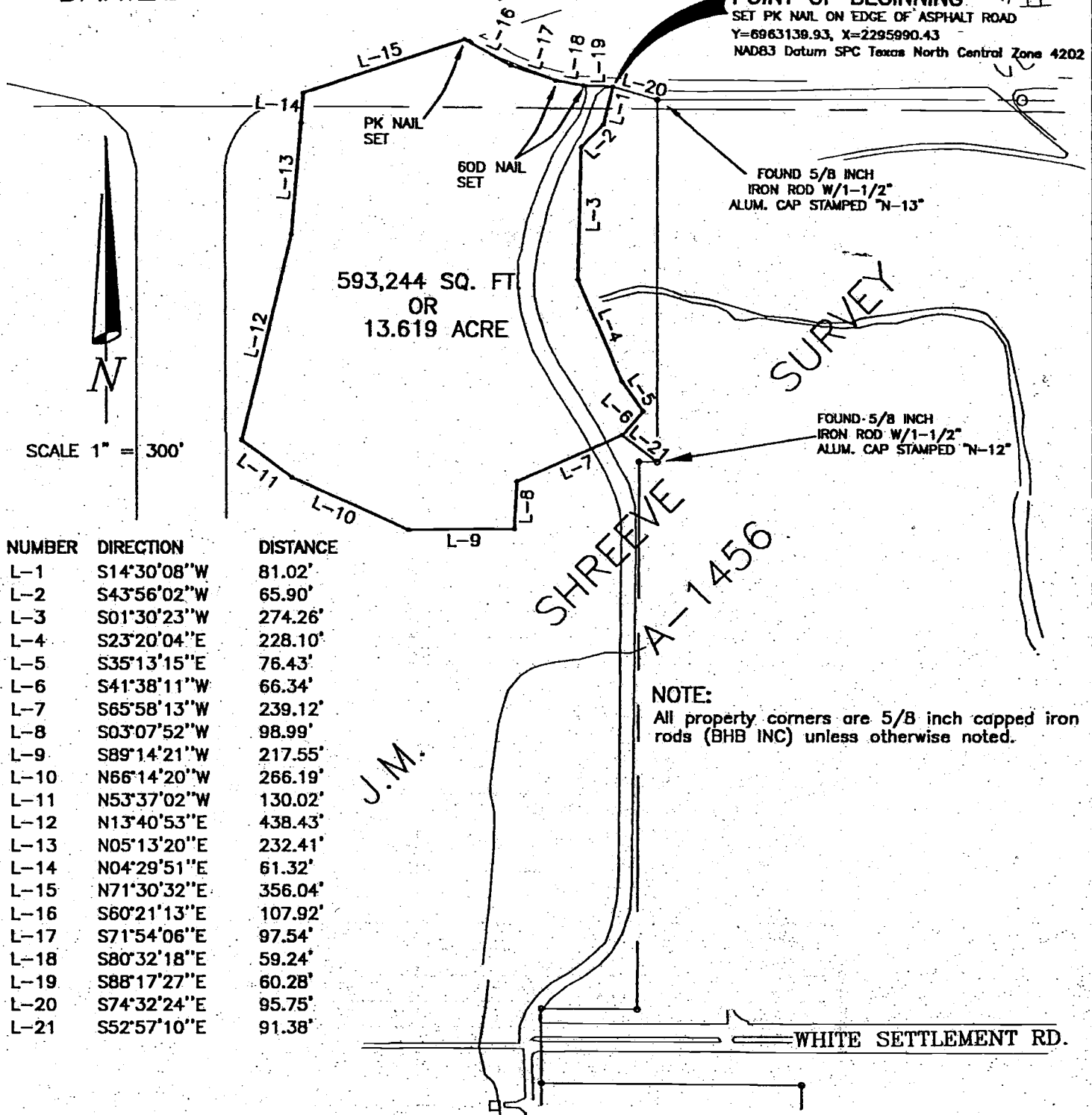
My Commission Expires

January 10, 2004



POINT OF BEGINNING

SET PK NAIL ON EDGE OF ASPHALT ROAD
Y=6963138.93, X=2295990.43
NAD83 Datum SPC Texas North Central Zone 4202



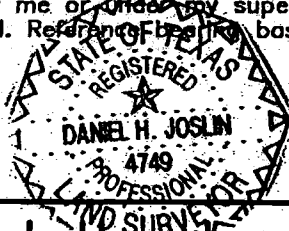
NUMBER	DIRECTION	DISTANCE
L-1	S14°30'08"W	81.02'
L-2	S43°56'02"W	65.90'
L-3	S01°30'23"W	274.26'
L-4	S23°20'04"E	228.10'
L-5	S35°13'15"E	76.43'
L-6	S41°38'11"W	66.34'
L-7	S65°58'13"W	239.12'
L-8	S03°07'52"W	98.99'
L-9	S89°14'21"W	217.55'
L-10	N66°14'20"W	266.19'
L-11	N53°37'02"W	130.02'
L-12	N13°40'53"E	438.43'
L-13	N05°13'20"E	232.41'
L-14	N04°29'51"E	61.32'
L-15	N71°30'32"E	356.04'
L-16	S60°21'13"E	107.92'
L-17	S71°54'06"E	97.54'
L-18	S80°32'18"E	59.24'
L-19	S88°17'27"E	60.28'
L-20	S74°32'24"E	95.75'
L-21	S52°57'10"E	91.38'

NOTE:

All property corners are 5/8 inch capped iron rods (BHB INC) unless otherwise noted.

I, Daniel H. Joslin, a Registered Professional Land Surveyor, of the State of Texas, do hereby state to the best of my knowledge and belief that the above survey is an accurate delineation of field survey and office computations performed by me or under my supervision, and that all property corners shall be marked on the ground as indicated. Reference is made to the basis per USCGS monuments ELEC and RUN using NAD83 data.

Daniel H. Joslin
R.P.L.S. No. 4749
Dated: August 17, 2000



Baird, Hampton & Brown, Inc.
Engineering & Surveying

309 W. 7th St., Ste. 500 Ft. Worth, TX 76102 Tel:(817)338-1277 Fax:(817)338-9245 E-Mail:mail@bhbbinc.com

DRAWN BY: DHJ
CHECKED BY: BHB
BHB PROJECT: 2000.006.031
DATE: AUGUST 17, 2000

**PROPERTY DESCRIPTION
LANDFILL AREA 8**

Being a tract of land located in the J. M. Shreeve Survey, A-1456 and the Daniel McVean Survey, A-1004, Tarrant County, Texas. Said tract being a portion of Carswell Air Force Base previously surveyed by T.D. Disheroon in October of 1976 and revised in October of 1978 of which survey is filed with the Corp of Engineers, Fort Worth Division, said tract also being a portion of the NAS Fort Worth JRB Overall Area per plat of survey called boundary resurvey of a tract known as NAS Fort Worth JRB (AKA Carswell Air Force Base) Tarrant County, Texas prepared by Baird, Hampton & Brown, Inc., Fort Worth, Texas, dated January 14, 1998 filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract being more particularly described by metes and bounds as follows:

BEGINNING at a set PK nail on the edge of an asphalt road (Y=6963139.93, X=2295990.43, NAD83 datum SPC Texas North Central Zone 4202), from said set PK nail a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-13" bears South 74 degrees 32 minutes 24 seconds East, a distance of 95.75 feet;

THENCE South 14 degrees 30 minutes 08 seconds West, a distance of 81.02 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 43 degrees 56 minutes 02 seconds West, a distance of 65.90 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 01 degrees 30 minutes 23 seconds West, a distance of 274.26 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 23 degrees 20 minutes 04 minutes East, a distance of 228.10 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 35 degrees 13 minutes 15 seconds East, a distance of 76.43 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 41 degrees 38 minutes 11 seconds West, a distance of 66.34 feet to a set 5/8 inch capped iron rod (BHB INC), from said set 5/8 inch capped iron rod (BHB INC) a found 5/8 inch iron rod with a 1-1/2 inch aluminum cap stamped "N-12" bears South 52 degrees 57 minutes 10 seconds East, a distance of 91.38 feet;

THENCE South 65 degrees 58 minutes 13 seconds West, a distance of 239.12 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 03 degrees 07 minutes 52 seconds West, a distance of 98.99 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 89 degrees 14 minutes 21 seconds West, a distance of 217.55 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 66 degrees 14 minutes 20 minutes West, a distance of 266.19 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 53 degrees 37 minutes 02 seconds West, a distance of 130.02 feet to set 5/8 inch capped iron rod (BHB INC);

THENCE North 13 degrees 40 minutes 53 seconds East, a distance of 438.43 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 05 degrees 13 minutes 20 seconds East, a distance of 232.41 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 04 degrees 29 minutes 51 minutes East, a distance of 61.32 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE North 71 degrees 30 minutes 32 seconds East, a distance of 356.04 feet to a set PK Nail;

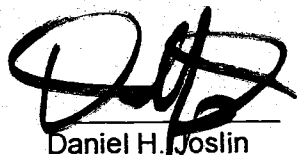
THENCE South 60 degrees 21 minutes 13 seconds East, a distance of 107.92 feet to a set 5/8 inch capped iron rod (BHB INC);

THENCE South 71 degrees 54 minutes 06 minutes East, a distance of 97.54 feet to a set 60D Nail;

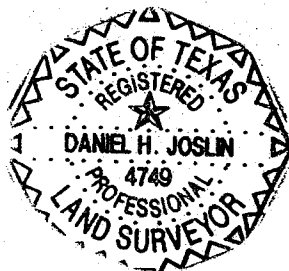
THENCE South 80 degrees 32 minutes 18 seconds East, a distance of 59.24 feet to a set 60D Nail;

THENCE South 88 degrees 17 minutes 27 minutes East, a distance of 60.28 feet to the POINT OF BEGINNING and containing 593,244 square feet or 13.619 acres of land.

Reference bearing basis per USCGS Monument ELEC and USCGS Monument RUN using NAD 83 datum.



Daniel H. Joslin
R.P.L.S. No. 4749
Dated: August 17, 2000



Robert J. Huston, *Chairman*

R. B. "Ralph" Marquez, *Commissioner*

John M. Baker, *Commissioner*

Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

March 5, 2001

Mr. Charles Pringle
Team Chief/BEC
HQ-AFCEE/ERB
3207 North Road, B-532
Brooks AFB, TX 78235-5363

LF 5:4, 5, 8 & WR (AF)
- WP-07 under
RR 2

Re: Carswell Air Force Base
TNRCC Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
Review of Draft RFI for SWMUs 22, 23, 24 and 25
Approval - Risk Reduction Standard No. 2 - Soil

Dear Mr. Pringle:

The Texas Natural Resource Conservation Commission (TNRCC) has completed the review of the *Draft RCRA Facility Investigation Solid Waste Management Units 22, 23, 24 and 25 NAS Fort Worth JRB, Texas Volumes I and II* (RFI Report) dated September 2000 and received by the TNRCC on September 14, 2000. The TNRCC also reviewed comments received from EPA Region 6 dated November 9, 2000. Solid Waste Management Units (SWMUs) 22, 23, 24 and 25 are identified in the RFI Report as four former landfills comprising approximately 22.75 acres and active for various periods of time from 1956 to 1975. The landfills reportedly received various quantities of domestic waste, construction debris, medical waste and flightline area waste. The RFI Report indicates that SWMU 24 received drums of cleaning solvents, tetraethyl lead sludge, small quantities of undetermined waste, and may have received live ordinance.

The RFI Report contains documentation indicating that closure of contaminated soil associated with SWMUs 22, 23, 24 and 25 have attained closure under 30 TAC §335.555 RRS No. 2 Closure/Remediation to Health-Based Standards and Criteria, such that no post-closure care or engineering or institutional control measures are required. Ground water contamination detected by monitoring wells installed as part of this RFI appears to be associated with a regional chlorinated solvent plume emanating from Air Force Plant (AFP) 4. AFP 4 has been listed on the National Priority List (NPL), a.k.a Superfund, and ground water contamination associated with releases from AFP 4 is being addressed via a Superfund Record of Decision (ROD) signed in 1996.

Therefore, based upon the information contained in the RFI Report and other information available to staff, it appears that the closure of contaminated soil associated with SWMUs 22, 23, 24 and 25

Mr. Charles Pringle

Page 2

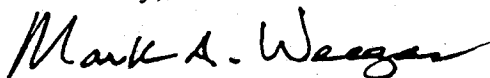
March 5, 2001

has attained closure/remediation to RRS No. 2. As specified in §335.560, AFBCA must submit proof of deed certification to the TNRCC within ninety (90) days from the date of this letter. Upon acceptance of the proof of deed certification, the TNRCC will transmit a final letter releasing AFBCA from post-closure care responsibilities for contaminated soil associated with SWMUs 22, 23, 24 and 25.

Please be aware that it is the continuing obligation of persons associated with a site to assure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the actual closure fails to comply with these requirements, the burden remains upon AFBCA to take any necessary and authorized action to correct such conditions. A TNRCC field inspector may review your RFI Report and conduct a closure inspection of the site.

Questions concerning this letter should be directed to me at (512) 239-2360 or via e-mail: mweegar@tnrcc.state.tx.us. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TNRCC Region 4 Office in Arlington. The TNRCC Solid Waste Registration Number and Unit Name should be referenced in all submittals.

Sincerely,



Mark A. Weegar, Project Manager
Team II, Corrective Action Section
Remediation Division
Texas Natural Resource Conservation Commission

MW:mw

cc: Mr. Alvin Brown, AFBCA/ROL, Austin, TX
Mr. Gary Miller, U.S. EPA Region 6, Dallas, TX.(6PD-NB)
Mr. Tim Sewell, TNRCC Region 4 - Arlington (MC-R4)
Ms. Luda Voskov, TNRCC Superfund Cleanup Section (MC-143)
Mr. Jerry Allred, TNRCC MSW Permits Section (MC-124)



TEXAS WATER COMMISSION
Stephen F. Austin State Office Building
Austin, Texas

PERMIT FOR MUNICIPAL
HAZARDOUS WASTE MANAGEMENT SITE
Issued under provisions of TEX.
HEALTH & SAFETY CODE ANN.
Chapter 361 (Vernon)

Name of Permittee:

U.S. Air Force/Carswell Air Force Base
7CSG/CC Carswell AFB
Fort Worth, Texas 76127-5000

Site Owner:

United States Department of the Air Force
7CSG/CC Carswell AFB
Fort Worth, Texas 76127-5000

Classification of Site:

Class I Hazardous Waste Storage,
Off-site, Non-commercial

The permittee is authorized to store and process wastes in accordance with the limitations, requirements, and other conditions set forth herein. This permit is granted subject to Texas Water Commission (TWC) rules, other Orders of the TWC, and laws of the State of Texas. Nothing in this permit exempts the permittee from compliance with the applicable rules and regulations of the Texas Air Control Board (TACB).

This permit will be valid until cancelled, amended, or revoked by the Commission, except that the authorization to store and process wastes shall expire midnight, 10 years after the date of permit approval.

All provisions in this permit stem from both State and Federal authority. The provisions marked with an asterisk (*) stem from Federal authority and will implement the applicable requirements of HSWA not presently authorized to the State of Texas.

APPROVED, ISSUED, AND EFFECTIVE this 7th day of February, 1991

ATTEST:

Mano A. Varguez

[Signature]
For the Commission

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TEXAS WATER COMMISSION



B. J. Wynne, III, Chairman
 John E. Birdwell, Commissioner
 Cliff Johnson, Commissioner

John J. Vay, General Counsel
 Michael E. Field, Chief Hearings Examiner
 Brenda W. Foster, Chief Clerk

February 13, 1991

Allen Beinke, Executive Director

Dear Permittee: RE: U.S. DEPT OF AIR FORCE - CARSWELL, AFB; Permit HW50289

Enclosed is a copy of:

- () 1. Permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code. In order that you may comply with monitoring requirements of your permit, self-reporting forms and instructions will be forwarded to you from the Water Quality Division at an early date. If your facility is not yet operating, please use the attached Notification of Completion of Facilities form to advise this agency and our district office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.
- () 2. Amended permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code. Please continue using the self-reporting forms you have on hand until new forms are forwarded by the Water Quality Division. If your facility is not yet operating, please use the attached Notification of Completion of Facilities form to advise this agency and our district office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.
- () 3. Renewal of a permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code. If your facility is not yet operating, please use the attached Notification of Completion of Facilities form to advise this agency and our district office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.
- (✓) 4. Permit for a hazardous or solid waste facility issued pursuant to Art. 4477-7, Texas Revised Civil Statutes. Your attention is directed to Commission Rule 335.5 which may be applicable to your facility.
- () 5. Permit or amended permit for a waste disposal well or an injection well issued pursuant to Chapter 27 of the Texas Water Code. In accordance with the Texas Water Code, you must file a copy of the permit with the city and county health authorities.

If there are any questions concerning this permit, please let us know.

Gloria A. Vasquez

Gloria A. Vasquez, Chief Clerk
 cc w/enclosures:

All Parties

TWC District Office 4

15 FEB 1991

Robert J. Huston, *Chairman*
R B "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

September 13, 2001

Mr. Charles Pringle
Team Chief/BEC
HQ-AFCEE/ERB
3207 North Road, B-532
Brooks AFB, TX 78235-5363

Re: Closure/Remediation - Risk Reduction Standard No. 2 - Soil Only
Acceptance of Deed Certification and Release From Post-closure Care Responsibilities
Carswell Air Force Base
TNRCC Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
SWMU 25 (Landfill Area 8)

Dear Mr. Pringle:

The Texas Natural Resource Conservation Commission (TNRCC) received a letter dated May 30, 2001 submitted by the Air Force Base Conversion Agency (AFBCA) containing proof of deed certification for Solid Waste Management Unit (SWMU) 25, Landfill Area 8. The certification states that contaminants remaining at the site have been remediated to meet non-residential (i.e. industrial/commercial) soil criteria under Risk Reduction Standard (RRS) No. 2 pursuant to Title 30 Texas Administrative Code (TAC) Chapter 335 Subchapters A and S.

In order to attain RRS No. 2, all industrial solid waste and municipal hazardous waste and waste residues must be removed or decontaminated to health based standards and criteria. Contaminants allowed to remain in-place in media of concern (i.e., soil, ground water, surface water and air) must not exceed the health based clean up levels as specified in 30 TAC §335.556. A Final Report, documenting that remediation at the facility has attained RRS No. 2 such that no post-closure care or engineering control measures are required, was previously accepted by the TNRCC in our letter dated March 5, 2001. Ground water contamination detected by monitoring wells installed as part of the SWMU 25 investigation appears to be associated with a regional chlorinated solvent plume emanating from Air Force Plant (AFP) 4. AFP 4 has been listed on the National Priority List (NPL), a.k.a Superfund, and ground water contamination associated with releases from AFP 4 is being addressed via a Superfund Record of Decision (ROD) signed in 1996.

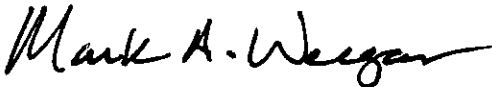
After review of the proof of deed certification, it appears that the deed certification requirements of 30 TAC §335.560(b) and (c) have been completed. The TNRCC's Corrective Action Section hereby releases AFBCA from post-closure care responsibilities associated with contamination for SWMU 25.

If applicable, please submit a request in writing, to update your Notice of Registration (NOR) to the TNRCC Registration and Reporting Section at Mail Code MC-129 with a copy of this letter as an attachment.

Please be aware that it is the continuing obligation of persons associated with a site to assure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the actual remediation fails to comply with these requirements, the burden remains upon AFBCA to take any necessary and authorized action to correct such conditions. A TNRCC field inspector may review your Final Report and conduct a closure inspection of the site.

Questions concerning this letter should be directed to me at (512) 239-2360. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TNRCC Region 4 Office in Arlington. The TNRCC Solid Waste Registration Number and Unit Name should be referenced in all submittals.

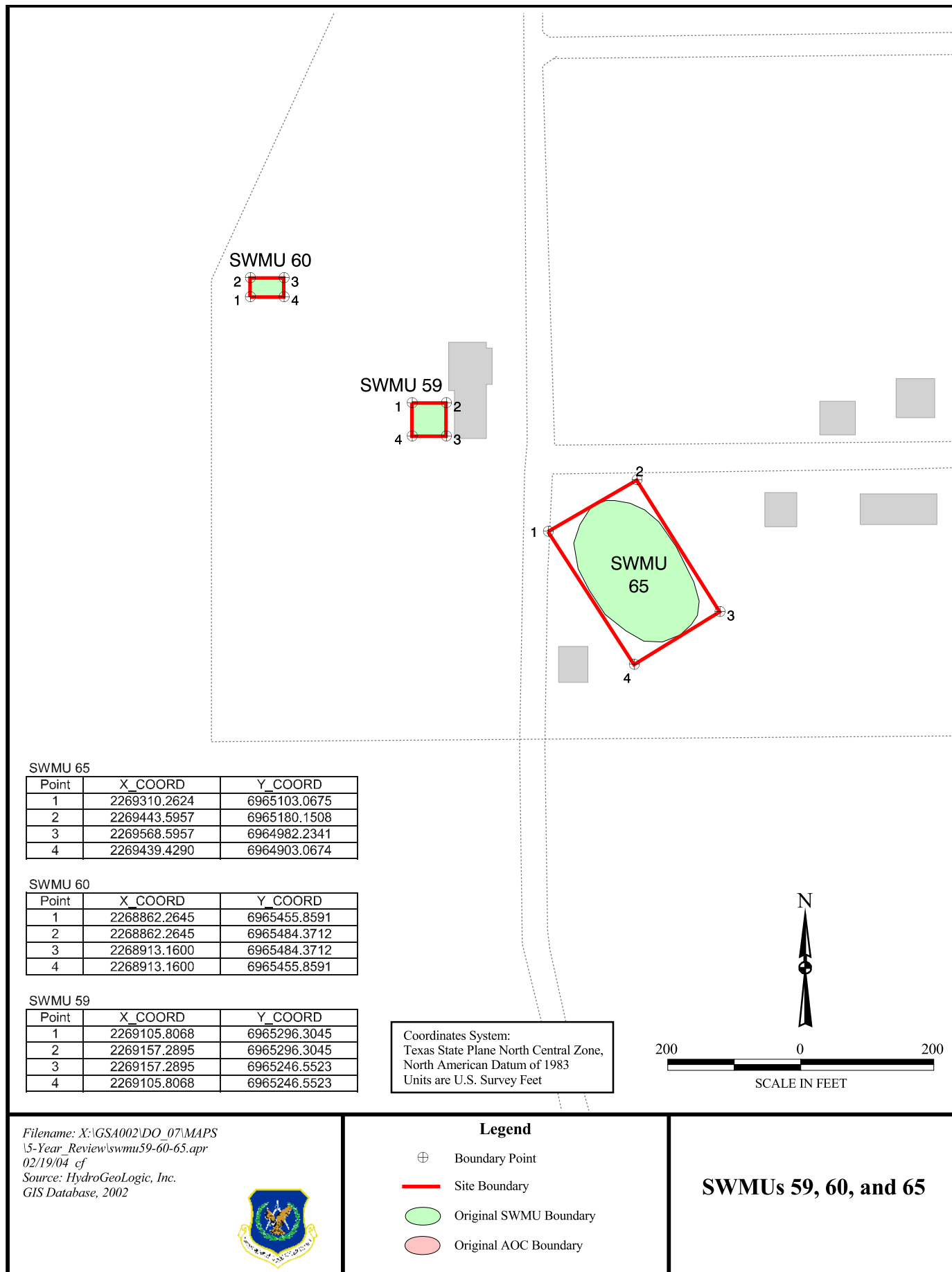
Sincerely,



Mark A. Weegar, Project Manager
Team II, Corrective Action Section
Remediation Division
Texas Natural Resource Conservation Commission

MW/mw

cc: Mr. Gary Miller, U.S. EPA Region 6, Dallas, TX.(6PD-NB)
Mr. Tim Sewell, TNRCC Region 4 - Arlington (MC-R4)



SWMU 59



Photo of SWMU 59 from RCRA Facility Assessment (A.T. Kearney, 1989).

SWMU 60



Photo of SWMU 60 from RCRA Facility Assessment (A.T. Kearney, 1989).



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE CENTER FOR ENVIRONMENTAL
EXCELLENCE
BROOKS AIR FORCE BASE TEXAS

MEMORANDUM FOR:

4 June 2001

Texas Natural Resource Conservation Commission

Mr. Mark Weegar

Team II, Corrective Action Section

Mail Code: MC-127

P.O. Box 13087

Austin, Texas 78711-3087

FROM: HQ AFCEE/ERB

3207 North Road, Bldg. 532

Brooks AFB, TX 78235-5363

SUBJECT: Carswell Air Force Base

TNRCC Solid Waste Registration No. 65004

Hazardous Waste Permit No. HW-50289

Review of Draft Closure Report for Offsite Weapons Storage Area

Approval- Risk Reduction Standard No. 2

Offsite Weapons Storage Area-Deed Certification

As required by Texas Administrative Code (TAC) §335.560, enclosed is copy of the Offsite Weapons Storage Area (WSA) Deed Certification.

Please call me at (210) 536-4477 if you have any questions or need additional information.

Sincerely,

A handwritten signature in cursive script, reading "Charles C. Pringle", is located below the "Sincerely," text.

Charles C. Pringle, P.E.

BRAC Program Manager/BEC for Carswell
Base Conversion Restoration Division

31
STATE OF TEXAS
TARRANT COUNTY



TRUE AND CORRECT COPY OF
ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK

BY MD Deputy

INDUSTRIAL SOLID WASTE CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission (TNRCC) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed of Records of Tarrant County, Texas in compliance with the recordation requirements of said rules:

I

Department of the Air Force has performed a remediation of the land described herein. A copy of the Notice of Registration (No. 65004), including a description of the facility, is attached hereto and is made part of this filing. A list of the known waste constituents, including known concentrations (i.e., soil and groundwater, if applicable), which have been left in place is attached hereto and is made part of this filing. Further information concerning this matter may be found by an examination of company records or in the Notice of Registration (No. 65004) files, which are available for inspection upon request at the central office of the TNRCC in Austin, TX.

The TNRCC derives its authority to review the remediation of this tract of land from the Texas Solid Waste Disposal Act, §361.002, Texas Health and Safety Code, Chapter 361, which enable the TNRCC to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to the Texas Water Code, §5.012 and §5.013, Texas Water Code, Annotated, Chapter 5, the TNRCC is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the TNRCC requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the TNRCC of the suitability of this land for any purpose, nor does it constitute any guarantee by the TNRCC that the remediation standards specified in this certification have been met by Department of the Air Force.

II

Being an 87.327 (3,803,964 square feet) acre tract of land situated in the G. B. Kenney Survey, Abstract No. 920, the E. L. Alford Survey, Abstract No. 2000, the S. B. Hopkins Survey, Abstract No. 673, the J. M. Rice Survey, Abstract No. 1799, the Socorro Farming Company Survey, Abstract No. 1840 and the F. W. Schoeverling Survey, Abstract No.

1398, Tarrant County, Texas and being out of a 247 acre tract of land known as Tract G-700 described in a "Judgement on Declaration of Taking No. 1" to the United States of America as recorded in Volume 2873, Page 583 of the Deed Records of Tarrant County, Texas and corrected in Volume 3338, Page 242 of the Deed Records of Tarrant County, Texas, said 87.327 acre tract of land being more particularly described by metes and bounds as follows:

COMMENCING at a concrete monument with brass cap stamped "Corps of Engineers" found in the west line of said 247 acre tract of land and being in the easterly line of a 35 acre tract of land deeded to Rudy E. Lambert as recorded in Volume 6485, Page 157 of the Deed Records of Tarrant County, Texas, from which the southwest corner of the said E. L. Alford Survey, Abstract No. 2000 bears, as described by said deed recorded in Volume 3338, Page 242 of the Deed Records of Tarrant County, Texas, North 26 degrees 50 minutes 00 seconds West, a distance of 430.00 feet, **THENCE**, from the **POINT OF COMMENCING**, North 71 degrees 53 minutes 24 seconds East, a distance of 418.63 feet to the **POINT OF BEGINNING**;

THENCE North 26 degrees 38 minutes 32 seconds East, a distance of 951.10 feet to a point for corner;

THENCE North 76 degrees 04 minutes 30 seconds East, a distance of 535.96 feet to a point for corner;

THENCE North 70 degrees 49 minutes 46 seconds East, a distance of 977.28 feet to a point for corner;

THENCE South 87 degrees 56 minutes 09 seconds East, a distance of 417.03 feet to a point for corner, from which a concrete monument with brass cap stamped "Corps of Engineers" found for the most easterly northeast corner of said 247 acre tract of land bears North 71 degrees 00 minutes 01 seconds East, a distance of 1152.98 feet;

THENCE South 32 degrees 55 minutes 21 seconds East, a distance of 556.33 feet to a point for corner;

THENCE South 05 degrees 46 minutes 05 seconds East, a distance of 1089.24 feet to a point for corner;

THENCE South 78 degrees 00 minutes 02 seconds West, a distance of 1058.04 feet to a point for corner;

THENCE South 88 degrees 16 minutes 07 seconds West, a distance of 1550.58 feet to a point for corner;

THENCE North 12 degrees 02 minutes 30 seconds West, a distance of 544.52 feet to the **POINT OF BEGINNING** and containing 87.327 acres or 3,803,964 square feet of land, more or less.

Note: Basis of Bearing being referenced to the Texas Coordinate System, NAD-83, the North Central Zone, Based on a G.P.S. Survey and established along the west line of said 247 acre tract of land (North 05 degrees 24 minutes 49 seconds East, a distance of 1840.03 feet).



TRUE AND CORRECT COPY OF
ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK

BY MD Deputy

Inorganic metals, mercury and semi-volatile organic compound contaminated soil has been remediated to meet residential soil criteria, in accordance with a plan described to meet the TNRCC's requirements in 31 Texas Administrative Code §335.555, which mandates that the remedy be designed to eliminate substantial present and future risk such as that no post-closure care of engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for residential purposes in accordance with risk reduction standards applicable at the time of this filing.

III

The owner of the site is Department of the Air Force, and its address is Air Force Base Conversion Agency (AFBCA), 3711 Fighter Drive, Suite 200, Austin, Texas 78719-2557, where more specific information may be obtained from the Base Realignment and Closure (BRAC) Environmental Coordinator.

EXECUTED this the 30 day of May, 2001.

Department of the Air Force

Charles C. Pringle

Charles C. Pringle, P.E.

BRAC Environmental Coordinator

STATE OF TEXAS

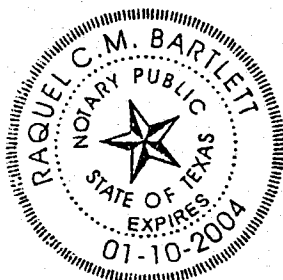
~~TARRANT COUNTY~~ County of BEXAR

BEFORE ME, on this the 30 day of May, 2001, personally appeared Charles C. Pringle, BRAC Environmental Coordinator of Former Carswell Air Force Base, Air Force Base Conversion Agency, Department of the Air Force, known to me to be the person and agent of said government agency whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 30 of May, 2001.

Raquel C. M. Bartlett

Notary Public in and for the State of Texas, of Bexar County



January 10, 2004
My Commission Expires



TRUE AND CORRECT COPY OF
ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK

BY MD Deputy

EXHIBIT "A"

Being an 87.327 (3,803,964 square feet) acre tract of land situated in the G. B. Kenney Survey, Abstract No. 920, the E. L. Alford Survey, Abstract No. 2000, the S. B. Hopkins Survey, Abstract No. 673, the J. M. Rice Survey, Abstract No. 1799, the Socorro Farming Company Survey, Abstract No. 1840 and the F. W. Schoeverling Survey, Abstract No. 1398, Tarrant County, Texas and being out of a 247 acre tract of land known as Tract G-700 described in a "Judgement on Declaration of Taking No. 1" to the United States of America as recorded in Volume 2873, Page 583 of the Deed Records of Tarrant County, Texas and corrected in Volume 3338, Page 242 of the Deed Records of Tarrant County, Texas, said 87.327 acre tract of land being more particularly described by metes and bounds as follows:

COMMENCING at a concrete monument with brass cap stamped "Corps of Engineers" found in the west line of said 247 acre tract of land and being in the easterly line of a 35 acre tract of land deeded to Rudy E. Lambert as recorded in Volume 6485, Page 157 of the Deed Records of Tarrant County, Texas, from which the southwest corner of the said E. L. Alford Survey, Abstract No. 2000 bears, as described by said deed recorded in Volume 3338, Page 242 of the Deed Records of Tarrant County, Texas, North 26 degrees 50 minutes 00 seconds West, a distance of 430.00 feet, **THENCE**, from the **POINT OF COMMENCING**, North 71 degrees 53 minutes 24 seconds East, a distance of 418.63 feet to the **POINT OF BEGINNING**;

THENCE North 26 degrees 38 minutes 32 seconds East, a distance of 951.10 feet to a point for corner;

THENCE North 76 degrees 04 minutes 30 seconds East, a distance of 535.96 feet to a point for corner;

THENCE North 70 degrees 49 minutes 46 seconds East, a distance of 977.28 feet to a point for corner;

THENCE South 87 degrees 56 minutes 09 seconds East, a distance of 417.03 feet to a point for corner, from which a concrete monument with brass cap stamped "Corps of Engineers" found for the most easterly northeast corner of said 247 acre tract of land bears North 71 degrees 00 minutes 01 seconds East, a distance of 1152.98 feet;

THENCE South 32 degrees 55 minutes 21 seconds East, a distance of 556.33 feet to a point for corner;

THENCE South 05 degrees 46 minutes 05 seconds East, a distance of 1089.24 feet to a point for corner;

THENCE South 78 degrees 00 minutes 02 seconds West, a distance of 1058.04 feet to a point for corner;

THENCE South 88 degrees 16 minutes 07 seconds West, a distance of 1550.58 feet to a point for corner;

THENCE North 12 degrees 02 minutes 30 seconds West, a distance of 544.52 feet to the **POINT OF BEGINNING** and containing 87.327 acres or 3,803,964 square feet of land, more or less.

Note:

Basis of Bearing being referenced to the Texas Coordinate System, NAD-83, the North Central Zone, Based on a G.P.S. Survey and established along the west line of said 247 acre tract of land (North 05 degrees 24 minutes 49 seconds East, a distance of 1840.03 feet).

Date: June 14, 2000



TRUE AND CORRECT COPY OF
ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK

BY

mn

Robert J. Huston, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

February 5, 2001

Mr. Charles Pringle
Team Chief/BEC
HQ-AFCEE/ERB
3207 North Road, B-532
Brooks AFB, TX 78235-5363



TRUE AND CORRECT COPY OF
ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK

BY MD Deputy

Re: Carswell Air Force Base
TNRCC Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
Review of Draft Closure Report for Offsite Weapons Storage Area
Approval - Risk Reduction Standard No. 2

Dear Mr. Pringle:

The Texas Natural Resource Conservation Commission (TNRCC) has completed the review of the *Draft Closure Report for Offsite Weapons Storage Area NAS Fort Worth/Carswell Field* (Final Report) dated July 2000 and received by the TNRCC on July 25, 2000. The TNRCC also reviewed comments received from EPA Region 6 dated August 9, 2000. The Offsite Weapons Storage Area is identified as a 511 acre off-site parcel owned by United States Air Force and used primarily for the storage and maintenance of munitions, as well as the disposal of ordnance and the limited storage of low-level radioactive waste. The referenced Final Report addresses the investigation and closure/remediation of the following sites:

- Areas A-1 and A-2 outdoor material storage and maintenance area;
- Area A-3 SWMU 59 Bldg. 8503 waste accumulation area and unpaved perimeter;
- Area A-5 disturbed surface area southwest of control fence;
- Explosive Ordinance Disposal (EOD) Range;
- Bunker floor drain outlets;
- Drainage ways DW-1, DW-2, DW-3, DW-4, DW-5, DW-6, DW-7, DW-8 and DW-9;
- Building 8500, 8503, and 8507 underground storage tanks (USTs);
- Areas beneath transformers; and
- Leach field

The closure of the Building 8505 and 8514 USTs and the Area A-4 Vehicle Fueling Area is being reviewed separately by the TNRCC's Petroleum Storage Tank Responsible Party Remediation Section.

According to the Final Report, a number of sites were closed to 30 TAC §335.554 RRS No.1

Mr. Charles Pringle

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February 5, 2001



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Closure/Remediation to Background. In order to attain RRS No. 1, all industrial solid waste and municipal hazardous waste and waste residues must be removed or decontaminated from affected media (i.e., soil, surface water, groundwater, air) to naturally occurring background levels. Waste constituents which are not naturally occurring (such as organic chemicals) must be cleaned to the analytical method detection limits. EPA defines these limits as Practical Quantitation Limits - the minimum concentration of a substance that can be measured within specific limits of precision and accuracy under routine operating lab conditions. According to the Final Report, the following sites have attained RRS No. 1:

- Areas A-1 and A-2 outdoor material storage and maintenance area;
- Area A-5 disturbed surface area southwest of control fence;
- Explosive Ordinance Disposal (EOD) Range;
- Building 8503 UST
- Drainage ways DW-1, DW-2, DW-4, DW-5, DW-6, DW-7, DW-8 and DW-9; and
- Areas beneath transformers

The Final Report also contains documentation indicating that a number of sites attained closure under 30 TAC §335.555 RRS No. 2 Closure/Remediation to Health-Based Standards and Criteria, such that no post-closure care or engineering or institutional control measures are required. According to the Final Report, the following sites have attained RRS No. 2:

- Area A-3 SWMU 59 Bldg. 8503 waste accumulation area and unpaved perimeter;
- Bunker floor drain outlets;
- Drainage way DW-3
- Building 8500 and 8507 USTs; and
- Leach field

Based upon the information contained in the Final Report and other information available to staff, it appears that the closure of the above listed sites have attained closure/remediation to RRS No. 1 and RRS No. 2, respectively.

Please note, however, as specified in §335.560 Post Closure Care and Deed Certification for Risk Reduction Standard No. 2, a person is required to place in the county deed records, a metes and bounds description of the portion or portions of the tract of land on which closure or remediation of industrial solid waste, municipal hazardous waste or contaminants was achieved. Our review of *Figure 6-1 Closure Boundaries* does not indicate that the sites closed under RRS No. 2 were broken out from the RRS No. 1 sites. Following conversations with representatives of the Air Force Base Conversion Agency (AFBCA), it was agreed by AFBCA that the entire area shown on Figure 6-1 would be closed under RRS No. 2 rather than re-survey the Weapons Storage Area to exclude RRS No. 1 sites. Based upon this agreement, the TNRCC's Corrective Action Section concurs with the closure of all sites at the Weapons Storage Area under RRS No. 2.

Mr. Charles Pringle
Page 3
February 5, 2001



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As specified in §335.560, AFBCA must submit proof of deed certification to the TNRCC within ninety (90) days from the date of this letter. Upon acceptance of the proof of deed certification, the TNRCC will transmit a final letter releasing AFBCA from post-closure care responsibilities for the Weapons Storage Area.

Please be aware that it is the continuing obligation of persons associated with a site to assure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the actual closure fails to comply with these requirements, the burden remains upon AFBCA to take any necessary and authorized action to correct such conditions. A TNRCC field inspector may review your Final Report and conduct a closure inspection of the site.

Questions concerning this letter should be directed to me at (512) 239-2360 or via e-mail: mweegar@tnrcc.state.tx.us. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TNRCC Region 4 Office in Arlington. The TNRCC Solid Waste Registration Number and Unit Name should be referenced in all submittals.

Sincerely,

Mark A. Weegar, Project Manager
Team II, Corrective Action Section
Remediation Division
Texas Natural Resource Conservation Commission

MW:mw

cc: Mr. Alvin Brown, AFBCA/ROL, Austin, TX
Mr. Gary Miller, U.S. EPA Region 6, Dallas, TX.(6PD-NB)
Mr. Tim Sewell, TNRCC Region 4 - Arlington (MC-R4)

6.0 SUMMARY OF CLOSURE REQUIREMENTS

As indicated in Section 3.0, five areas within the Offsite WSA require closure under TAC §335. These areas include:

- SWMU 59 including areas located to the north, west, and south of the concrete pad surrounding Bldg. 8503 (Area A-3 and DW-1);
- areas surrounding bunker Bldgs. 8531, 8535, 8537, 8539, 8541, 8552, 8554, 8556, 8558, and 8560;
- drainage way DW-3;
- former UST locations UST-8500 and UST-8507; and
- the leach field.

With the exception of the leach field, all areas contain soils with contaminants at concentrations exceeding background levels. As discussed in Sections 5.0, all media with contaminant concentrations exceeding RRSN2 CULs have been removed. These areas will therefore be closed in accordance the RRSN2. The leach field will be closed under RRNS1.

A summary of the closure requirements that have been attained for each of these areas are provided below. Section 6.1 summarizes final conditions at each area and identifies contaminants remaining. Sections 6.2 describes the closure boundary or track of land on which the closure is achieved based on background levels.

6.1 SUMMARY OF FINAL CONDITIONS

6.1.1 SWMU 59 Including Area A-3 and Drainage Way DW-1

SWMU 59, Area A-3, and drainage way DW-1 are shown on Figure 6-1. As discussed in Section 3.1.1, 10 inorganic analytes exceeded background levels in soil samples collected within 5 feet of the perimeter of the Bldg. 8503 concrete pad. A similar group of inorganic analytes were detected in drainage way DW-1. DW-1 is located 15 to 20 feet from the edge of the concrete pad. These inorganics include antimony, arsenic, cadmium, chromium, copper, iron, lead, mercury, molybdenum and zinc. These exceedances were generally found in surface soil samples (0 to 6 inches bgs). RFI results document that, with exception of mercury, all inorganic analytes attributable are to an unpermitted release are below the RRSN2 CULs. Subsequent to the RFI, soils containing elevated concentrations of mercury were removed as described in Section 5.1.10.

In addition to inorganic analyses, eight Area A-3 and DW-1 locations contained VOCs above background levels. Background levels for VOCs were generally considered to be the detection limits. The compounds included 1,4-dichlorobenzene, cis 1,2-dichloroethene, and trichloroethene. These compounds were reported only in subsurface soils between 2.5 feet bgs and bedrock (maximum depth 10.5 feet bgs). All concentrations are below the RRSN2 CULs



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BY

MD

Deputy

Contract No. F41624-95-D-8002/Delivery Order 009

Final Closure Report

Offsite Weapons Storage Area

NAS Fort Worth JRB Carswell Field

February 5, 2001

6.1.2 Bunker Buildings

Thirteen inorganic analytes remain in soils surrounding the bunker drains at concentrations above background levels and below the RRSN2 CULs. These include antimony, arsenic, cadmium, chromium, cobalt, copper, iron, lead, magnesium, mercury, nickel, selenium, and zinc.

RFI results indicated that mercury, copper and cadmium were present at six locations at concentrations above RRSN2 CULs. As discussed in Sections 5.1.5 through 5.1.9, soils from these locations were removed.

RFI and removal results generally indicate that contamination above background is limited to the surface soil (0 to 6 inches bgs) immediately adjacent to the bunker drain (within 2 feet of the wall). Concentrations typically decreased to below background within 15 feet from the wall, however, a number of analytes were detected above background beyond this point. The results of the RFI and removal sampling therefore indicate that surface soils containing inorganics with concentrations above background levels and below the RRSN2 CUL extent to the roadway surrounding the bunker buildings. Soils in the area between the two rows of bunker buildings (drainage way DW-2) contain inorganics with concentrations below background levels (see Figure 6-1).

6.1.3 Drainage Way DW-3

RFI results indicate that drainage way DW-3 soils contained four inorganics and 16 PAHs above background levels and below the RRSN2 CULs. The four inorganics included magnesium, mercury, selenium, and zinc.

PAHs introduced to the ditch from the power plant were detected in the drainage way above RRSN2 CULs. The area associated with this unpermitted release extends north and south to the top of the ditch bank and approximately 325 feet east from the pipe discharge (the midpoint between RFI sample locations DW3-118 and DW3-127).

Although soils in areas beyond the top of the ditch bank and within the ditch downgradient from DW3-127 contain PAHs above RRSN2 CULs, they are attributed to vehicles that historically utilized that area and are therefore not subject to the closure requirements of TAC §335.

Following the DW-3 removal, confirmation samples indicate that PAH concentrations within the drainage way were reduced to concentrations less than RRSN2 CULs (see Section 5.1.1). Those PAHs remaining in the drainage way are identified in Table 5-1.

6.1.4 UST Locations UST-8500 and UST-8507

All UST-8500 and UST-8507 surface and subsurface soils containing PAHs at concentrations above RRSN2 CULs were removed (see Sections 5.1.2 and 5.1.4). In general, the removal effort reduced soil PAH concentrations to below the analytical detection limits. At UST-8500, only soils along the south tank pit wall and in the pipe run area between the pit and the building contain PAHs at concentrations above background (see Figure 5-2). At UST-8507, soils containing PAHs remain along the west tank pit

Final Closure Report

Offsite Weapons Storage Area

NAS Fort Worth JRB Carswell Field

Contract No. F41624-95-D-8002/Delivery Order 009

February 5, 2001

wall and in the pipe run area between the pit and the building (see Figure 5-4). Those PAHs remaining in the UST locations are identified in Tables 5-2 and 5-4.

6.1.5 Leach Field

No analytes attributable to the leach field were reported above background. In order to meet the closure requirements of RRSN1 The southern concrete wall of the leach field was removed (see Section 5.1.11).

6.2 CLOSURE BOUNDARY

The closure boundary or the track of land on which the closure is achieved is typically defined by a series of locations where site contaminant concentrations are below background. Offsite WSA closure boundary definition is complicated by the fact that all areas to be closed are adjacent to other unregulated areas with inorganic metals and SVOC soil concentrations elevated above the established site background (see Section 3.1).

At SWMU 59, Area A-3, and drainage way DW-1, three sample locations (A3-024, A3-025, and DW1-10) define the western and southern boundary of this area to background. However, the eastern side is adjacent to a roadway. East of the roadway is area A-1 (see Figure 2-2). Area A-1 contains inorganic metals and SVOCs at concentrations above background. However elevated concentrations in A-1 are not attributed to an unpermitted release.

Impacted soils associated with the bunker buildings also extend to a surrounding roadway. Beyond the roadway are areas A-1 and A-2. Inorganic metal concentrations in these adjacent areas were elevated above background but are not attributed to an unpermitted release.

Soils surrounding drainage way DW-3 and UST 8507 contain PAHs due to vehicle use through the area, as opposed to the unpermitted release from the power plant.

In response to these conflicts, a larger track is identified around the perimeter of the active Offsite WSA to define the closure boundary to background. These sample locations include:

- DW6-001;
- DW6-002;
- DW5-002;
- A5-004;
- SP-002;
- DW8-002;
- DW8-001;
- DW9-001; and
- DW7-001.



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BY MD Deputy

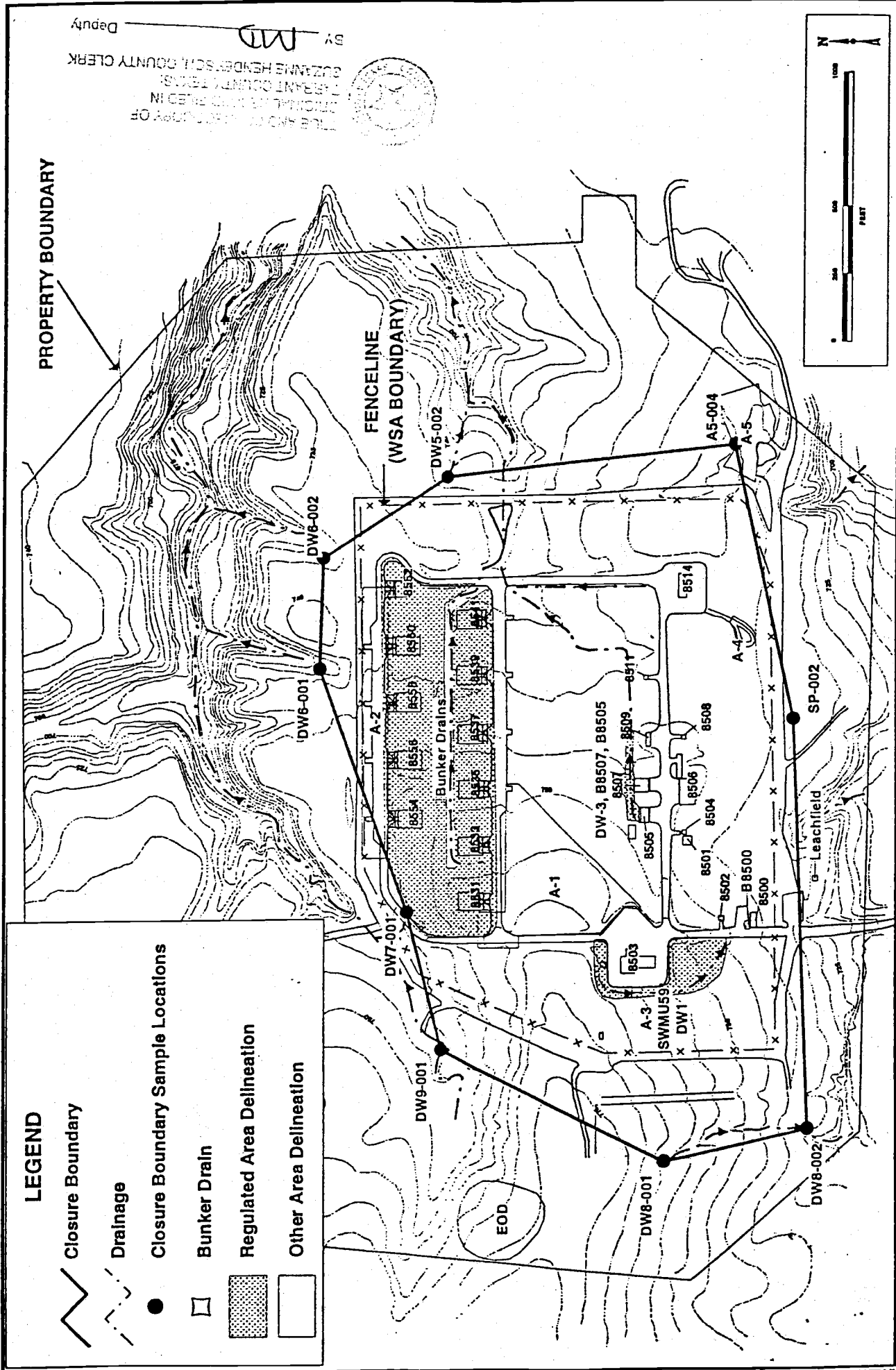
February 5, 2001

These sample locations and the Offsite WSA closure boundary are identified on Figure 6-1. Analytical results for samples collected at these locations are summarized on Figure 3-9 (sample location A5-4) and Figure 3-28 (all drainage way and seep sample locations). Appendix G contains laboratory analytical results for these sample locations. Appendix C contains the Deed Certification for RRSN2 based on this closure boundary.



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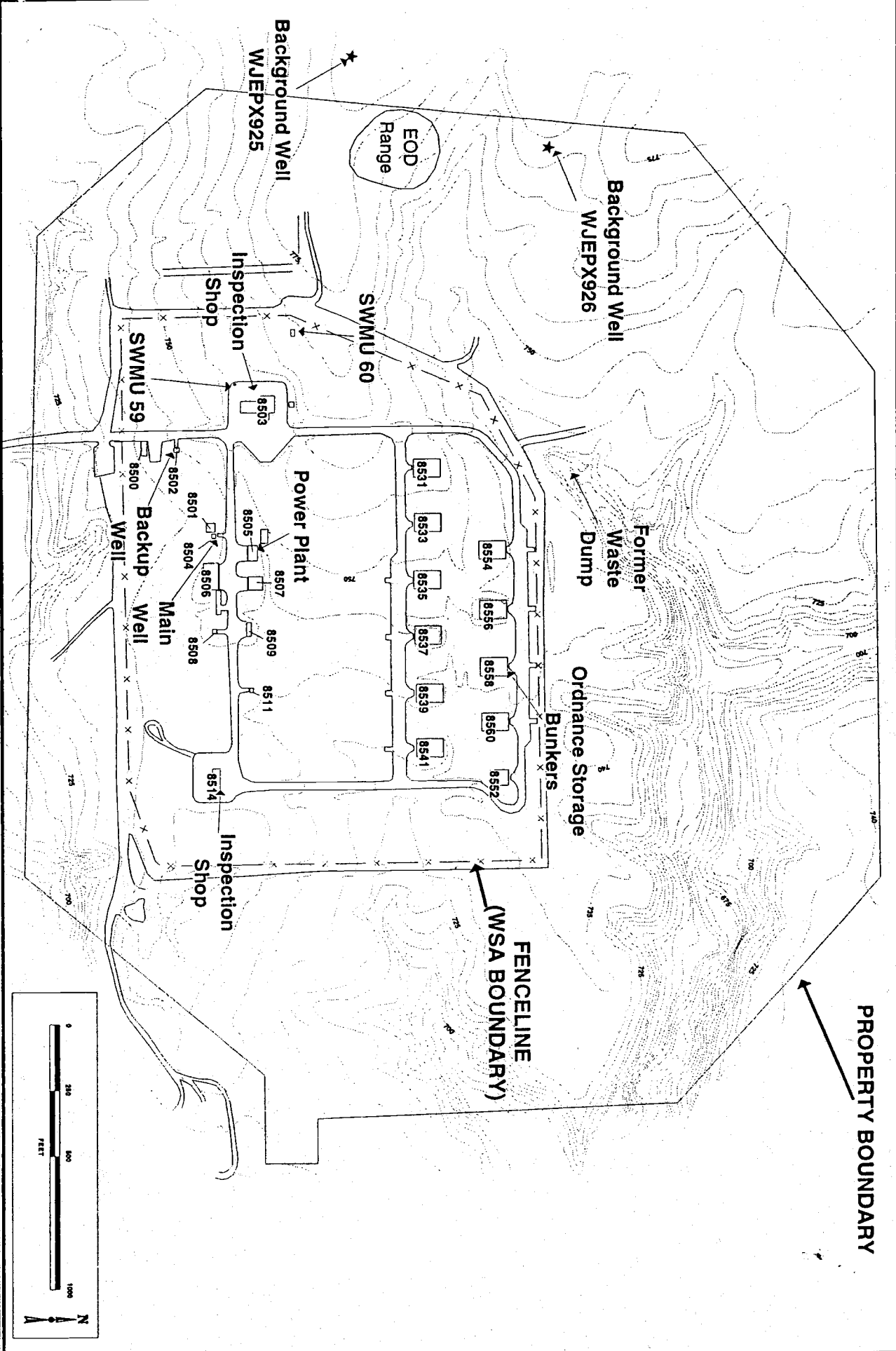


Figure 1-4 -- Site Map



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BY MD Deputy

D201120881
UNIVERSE TECHNOLOGIES INC
2100 BYPASS RD BLDG 580
C HEWITT
BROOKS AFB TX 78235

-W A R N I N G-T H I S I S P A R T O F T H E O F F I C I A L R E C O R D--D O N O T D E S T R O Y

I N D E X E D -- T A R R A N T C O U N T Y T E X A S
S U Z A N N E H E N D E R S O N -- C O U N T Y C L E R K
O F F I C I A L R E C E I P T

T O : A N D R E A L W E S T

RECEIPT NO	REGISTER	RECD-BY	PRINTED DATE	TIME
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T O T A L D O C U M E N T S : 0 1 4 8 . 0 0

BY: MD

ANY PROVISION WHICH RESTRICTS THE SALE RENTAL OR USE
OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE
IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

STATE OF TEXAS } I, SUZANNE HENDERSON, County clerk in and for said County and State,
COUNTY OF TARRANT } do hereby certify that the above and foregoing is a true and correct copy
of the instrument, filed for record on the 21st day of May 2001, and duly recorded on
the 3rd day of May 2001 in Instrument Number 5001120881 or in
Volume — Page — of the

Official Records of Tarrant County, Texas.

WITNESS my hand and seal of office at Fort Worth, Texas this 21st day of May 2001

SUZANNE HENDERSON, COUNTY CLERK
TARRANT COUNTY, TEXAS

By M. A. De la Cruz Deputy



CRSWL AR # 742 Page 148 of 165
File: 97-1-9
D.E. 34-C 726 1

---UNITED STATES ENVIRONMENTAL PROTECTION AGENCY---
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

APR 05 2002

Mr. Charles C. Pringle, P.E.
BRAC Environmental Coordinator
HQAFCCE/ERB
3207 North Road, Bldg. 532
Brooks AFB, TX 78235-5344

Dear Mr. Pringle:

The Environmental Protection Agency (EPA) has reviewed the draft "Finding of Suitability to Transfer (FOST) and Supplemental Environmental Baseline Survey (SEBS) Documents, for the Offsite Weapons Storage Area, Carswell Air Force Base, Texas." The documents were received on February 20, 2002. The Air Force Base Conversion Agency (AFBCA) proposes the transfer of this site through a public sale to be conducted by the General Services Administration. The anticipated use of this property is unknown. However, the surrounding area is residential, light industrial and agricultural. This transfer is for approximately 247 acres and includes several buildings and other improvements. Based upon this review, we offer the following comments:

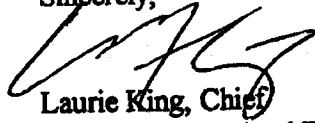
1. This property includes three Solid Waste Management Units (SWMUs) 59, 60 and 65. Although these SWMUs are closed to Risk Reduction Standard No. 2, they were listed in either the original Permit dated February 7, 1991, or in the March 2, 1995, letter from the Texas Natural Resource Conservation Commission (TNRCC). The Offsite Weapons Storage Area (WSA) is described in Tract G-700 and is included as Attachment B in the 1991, Permit. For the property to be transferred, the AFBCA needs to complete the modification of the Permit to note the completion of work on the SWMUs and to change the property descriptions in the Permit to remove reference to the WSA.
2. Section 5 4 of the draft FOST discusses the clearance of the Explosive Ordnance Disposal (EOD) Range. The EOD range was cleared for use as livestock grazing and other uses for which soil will not be disturbed below a depth of 5 to 1 foot. The FOST contains no other documents describing how such a restriction will be enforced. Similarly, the AFBCA has provided no information on deed restrictions to prevent incompatible uses of the property. The following (or sufficiently similar) language, part of which is taken from the Certificate of Clearance, should be included in the deed conveying the former EOD property "All present and/or future users, owners and inhabitants of this land are hereby advised that the possibility does exist that some explosive ordnance may still be located on this land, due to surface distortion, erosion by weather and the fact present technology does not permit a guarantee of complete removal. Therefore, digging, excavating, or otherwise disturbing soil below a depth of .5 feet is prohibited without the prior written

permission of the United States Air Force." The Environmental Factors Considered table in Attachment 2 to the FOST should also show that a deed restriction is required.

3. **Section 5.5 Asbestos Containing Material (ACM).** The FOST indicates ACM "is in fair condition and not noticeably damaged or deteriorated to the extent that it creates a potential source or airborne fibers " A tour of the buildings during the removal of contaminated soil indicated the asbestos pipe insulation had fallen off and was laying on the floor in the Electric Power Station, Building 8505. This would create a potential source of airborne fibers. In fact, the Supplemental Environmental Baseline Survey indicated that five (5) buildings have "friable thermal system insulation" (TSI). (SEBS § 3.3.1, p.11). Has a removal of the friable ACM taken place?
4. **Under Deed Restrictions and Notifications** a section should be added to state that all the underground storage tanks (USTs) were removed from the site. (FOST § 5).
5. The approval for the Draft Closure Report for the Offsite WSA indicates the Building 8505 and 8514 USTs and the Area A-4 Vehicle Fueling Area is being reviewed separately by the TNRCC Petroleum Storage Tank Responsible Party Remediation Section. These approvals need to be included in the FOST documentation, and are prerequisites to EPA's approval of the Final FOST.
6. In the Deed Restrictions and Notifications portion of the FOST, a section should be added to state that water wells are located on the property. The results of the sampling of these water wells should be presented in the FOST. The results indicate that naturally occurring radio-nuclides were present in the groundwater above drinking water standards
7. The TNRCC closure letter attached to the draft FOST indicates that closure to RRS No. 2 requires deed certification (citing 30 TAC § 335.560) Since the AFBCA Closure Report does not distinguish between the portions of property closed to RRS No. 1 and the portions closed to RRS No. 2, all 247 acres of the WSA is considered to have been closed to RRS No. 2. (FOST Attachment 4). Yet, the AFBCA deed certification only relates to 87.327 of the total 247 acres. This would not appear to meet TNRCC's conditions of closure. To resolve this issue, the AFBCA should either file a deed certification for the entire parcel, or perform a metes and bounds survey to support a delineation of that portion of the property closed to RRS No. 1 from that portion closed under RRS No. 2.
8. The draft FOST (FOST § 5.6, p.4) and Lead-Based Paint Sample Summary indicate that a substantial percentage of the facilities on the WSA (19 of 24) contain Lead Based Paint (LBP) in excess of EPA/HUD guidelines (5,000 ppm), and that the majority of the paint was found to be in poor condition. (SEBS, Attachment 4, p. 3-36). Although the draft FOST indicates the future reuse of the property is unknown, the property will not be suitable for residential use under such conditions. (FOST § 1, p.1). The AFBCA will need to include specific language in any transfer deed notifying successors in interest of the presence and risks of LBP, and precluding occupancy for residential purposes prior to successful remediation of the LBP.

If you have any questions, please contact Mr Gary Miller of my staff at (214) 665-8306.

Sincerely,



Laurie King, Chief
New Mexico/Federal Facilities
Section

cc: Mr. Mark Weegar, Project Coordinator, TNRCC
Mr. Jim Waldron, AFBCA/DC

Robert J. Huston, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

September 14, 2001

Mr. Charles Pringle
Team Chief/BEC
HQ-AFCEE/ERB
3207 North Road, B-532
Brooks AFB, TX 78235-5363

Re: Closure/Remediation - Risk Reduction Standard No. 2
Acceptance of Deed Certification and Release From Post-closure Care Responsibilities
Carswell Air Force Base
TNRCC Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
Offsite Weapons Storage Area

Dear Mr. Pringle:

The Texas Natural Resource Conservation Commission (TNRCC) received a letter dated June 4, 2001 submitted by the Air Force Base Conversion Agency (AFBCA) containing proof of deed certification for the Offsite Weapons Storage Area. The certification states that contaminants remaining at the site have been remediated to meet residential soil criteria under Risk Reduction Standard (RRS) No. 2 pursuant to Title 30 Texas Administrative Code (TAC) Chapter 335 Subchapters A and S.

In order to attain RRS No. 2, all industrial solid waste and municipal hazardous waste and waste residues must be removed or decontaminated to health based standards and criteria. Contaminants allowed to remain in place in media of concern (i.e., soil, ground water, surface water and air) must not exceed the health based clean up levels as specified in 30 TAC §335.556. A Final Report, documenting that remediation at the facility has attained RRS No. 2 such that no post-closure care or engineering control measures are required, was previously accepted by the TNRCC in our letter dated February 5, 2001.

After review of the proof of deed certification, it appears that the deed certification requirements of 30 TAC §335.560(b) and (c) have been completed. The TNRCC hereby releases AFBCA from post-closure care responsibilities associated with contamination for the Offsite Weapons Storage Area.

At any time after receipt of this letter, AFBCA may choose to submit an application to the TNRCC's Industrial and Hazardous Waste Permits Section at Mail Code MC-130 requesting to modify the referenced permit to show a change in the corrective action status of SWMUs listed in Section VIII. RCRA Facility Investigation.

Mr. Charles Pringle
Page 2
September 14, 2001

If applicable, please submit a request in writing, to update your Notice of Registration (NOR) to the TNRCC Registration and Reporting Section at Mail Code MC-129 with a copy of this letter as an attachment.

Please be aware that it is the continuing obligation of persons associated with a site to assure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the actual remediation fails to comply with these requirements, the burden remains upon (AFBCA) to take any necessary and authorized action to correct such conditions. A TNRCC field inspector may review your Final Report and conduct a closure inspection of the site.

Questions concerning this letter should be directed to me at (512) 239-2360. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TNRCC Region 4 Office in Arlington. The TNRCC Solid Waste Registration Number and Unit Name should be referenced in all submittals.

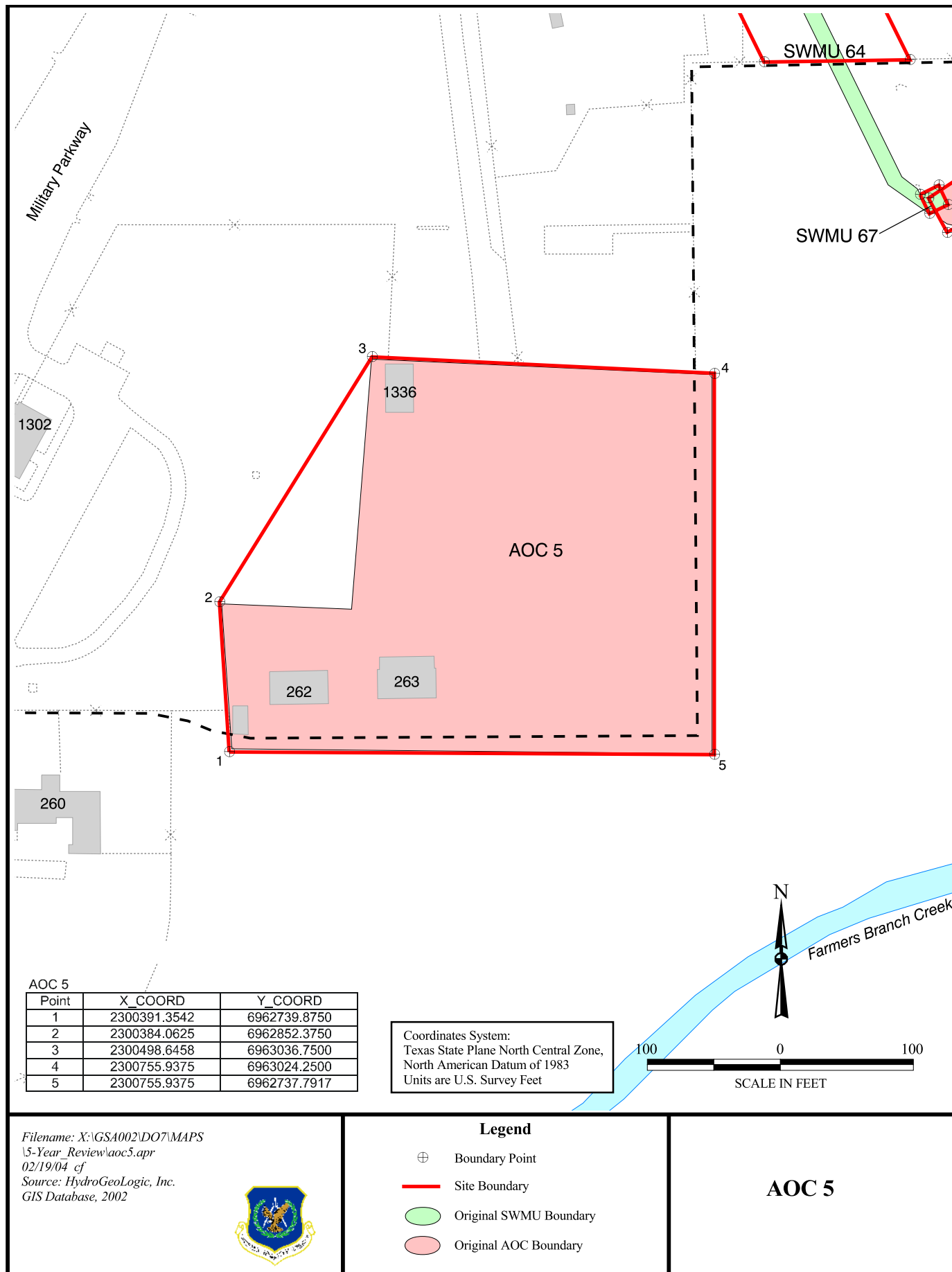
Sincerely,



Mark A. Weegar, Project Manager
Team II, Corrective Action Section
Remediation Division
Texas Natural Resource Conservation Commission

MW/mw

cc: Mr. Gary Miller, U.S. EPA Region 6, Dallas, TX.(6PD-NB)
Mr. Tim Sewell, TNRCC Region 4 - Arlington (MC-R4)



AOC 5



Photo of AOC 5 looking south from the entrance of the Grounds Maintenance Yard (2004).



Photo of AOC 5 looking south from the western portion of the Grounds Maintenance Yard (2004).

STATE OF TEXAS
TARRANT COUNTY



TRUE AND CORRECT COPY OF
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TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK
BY Tina Proenza Deputy

INDUSTRIAL SOLID WASTE CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission (TNRCC) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Tarrant County, Texas in compliance with the recordation requirements of said rules:

I

Department of the Air Force has performed a remediation of the land described herein. A copy of the Notice of Registration (No. 65004), including a description of the facility, is attached hereto and is made part of this filing. A list of the known waste constituents, including known concentrations (i.e., soil and ground water, if applicable), which have been left in place is attached hereto and is made part of this filing. Further information concerning this matter may be found by an examination of company records or in the Notice of Registration (No. 65004) files, which are available for inspection upon request at the central office of the TNRCC in Austin, Texas.

The TNRCC derives its authority to review the remediation of this tract of land from the Texas Solid Waste Disposal Act, §361.002, Texas Health and Safety Code, Chapter 361, which enables the TNRCC to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to the Texas Water Code, §5.012 and §5.013, Texas Water Code, Annotated, Chapter 5, the TNRCC is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the TNRCC requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the TNRCC of the suitability of this land for any purpose, nor does it constitute any guarantee by the TNRCC that the remediation standards specified in this certification have been met by Department of the Air Force.

II

Being a 2.957 acre (128,804 square feet) parcel of land located in the Cornelius Connelly Survey, Abstract No. A-319, Tarrant County, Texas, and being out of a 10.4 acre parcel known as Tract No. 3C described in a deed to the United States of America recorded in Volume 2740, page 451, Deed Records of Tarrant County, Texas; said 2.957 acre parcel being more particularly described as follows:

Being a tract of land located in the Cornelius Connelly Survey, A-319, Tarrant County, Texas. Said tract being a portion of Carswell Air Force Base previously surveyed by T.D. Disheroon in October of 1976 and revised in October of 1978 of which survey is filed with the Corp of Engineering, Fort Worth Division, said tract also being a portion of the NAS Fort Worth JRB Overall Area per plat of survey called boundary resurvey of a tract known as NAS Fort Worth JRB (AKA Carswell Air Force Base) Tarrant County, Texas prepared by Baird, Hampton & Brown, Inc., Fort Worth, Texas, dated January 14, 1998 and filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract being more particularly described by metes and bounds as follows:

Beginning at a found 5/8 inch iron rod from which a Corp of Engineer Brass Monument Number 1 bears North 44 degrees 29 minutes 54 seconds West, a distance of 8657.21 feet, also from said beginning point a Corp of Engineer Brass Monument Number 56 bears North 14 degrees 24 minutes 40 seconds West, a distance of 3580.29 feet, said brass monuments as show on the above mentioned surveys; thence South 00 degrees 34 minutes 13 seconds East, a distance of 502.79 feet to a found 5/8 inch iron rod; thence South 89 degrees 40 minutes 34 seconds West, a distance of 351.56 feet to a found 5/8 inch iron rod; thence North 16 degrees 21 minutes 48 seconds East, a distance of 174.28 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 00 degrees 11 minutes 30 seconds East, a distance of 136.13 feet to set 5/8 inch capped iron rod (BHB INC); thence North 42 degrees 58 minutes 15 seconds East, a distance of 91.73 feet to a set 5/8 inch capped iron rod (BHB INC); thence North 60 degrees 12 minutes 02 seconds East, a distance of 270.20 feet to the Point Of Beginning and containing 128,804 square feet or 2.957 acre of land. Reference bearing basis per USCGS Monument ELEC and USCGS Monument Run using NAD 83 datum.

Solvent-contaminated soil has been remediated to meet non-residential (i.e., industrial/commercial soil criteria), in accordance with a plan designed to meet the TNRCC's requirements in 31 Texas Administrative Code §335.555), which mandates that the remedy be designed to eliminate substantial present and future risk such that no post-closure care or engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for non-residential (i.e., industrial/commercial) purposes in accordance with risk reduction standards applicable at the time of this filing. Future land use is intended to be non-residential.

In accordance with the requirements for Standard 2 cleanups where the remedy is based upon non-residential soil criteria, the current owner has undertaken actions as necessary to protect human health or the environment in accordance with the rules of the TNRCC.



TRUE AND CORRECT COPY OF
ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK

BY JP Deputy

INDEXED -- TARRANT COUNTY TEXAS
SUZANNE HENDERSON -- COUNTY CLERK
OFFICIAL RECEIPT

RECEIPT NO	REGISTER	RECD-BY	PRINTED DATE	TIME
201173207	DR91	CAP	03/29/2001	11:05

	INSTRUMENT	FEECD	INDEXED	TIME	
1	D201066084	WD	20010329	11:05	CK 1540
2	01 COPIES	CC			C O P I E S

T O T A L : D O C U M E N T S : 01 F E E S : 27.00

I, SUZANNE HENDERSON, County Clerk in and for said County and State of TEXAS }
 do hereby certify that the above and foregoing is a true and correct copy of the instrument filed for record on the _____ day of _____, and duly recorded in instrument Number _____ of Volume _____ of the _____ Page _____ of the _____ Records of Tarrant County, Texas.
 B Y: _____ day of _____
SUZANNE HENDERSON
 TARRANT COUNTY, TEXAS
 COUNTY CLERK

ANY PROVISION WHICH RESTRICTS THE SALE RENTAL OR USE
OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE
IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.



TRUE AND CORRECT COPY OF
ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS;
SUZANNE HENDERSON, COUNTY CLERK

BY [Signature] Deputy

III

The owner of the site is Department of the Air Force, and its address is Air Force Base Conversion Agency (AFBCA), Regional Operating Location Bergstrom AFB, 3711 Fighter Drive, Austin, Texas 78719-2557, where more specific information may be obtained from the Base Realignment and Closure (BRAC) Environmental Coordinator.

EXECUTED this the 28 day of March, 2001.

Department of the Air Force

Charles C. Pringle

Charles C. Pringle

BRAC Environmental Coordinator

STATE OF TEXAS
TARRANT COUNTY

BEFORE ME, on this the 28 day of March 2001, personally appeared Charles C. Pringle, BRAC Environmental Coordinator of Former Carswell Air Force Base, Air Force Base Conversion Agency, Department of the Air Force, known to me to be the person and agent of said government agency whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

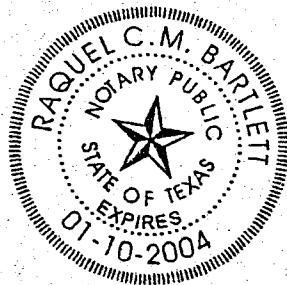
GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 28 of March, 2001.

Raquel C. M. Bartlett

Notary Public in and for the State of Texas, of Bexar County

January 10, 2004

My Commission Expires



TRUE AND CORRECT COPY OF
ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK

BY SH Deputy

PROPERTY DESCRIPTION

GROUND MAINTENANCE YARD

Being a tract of land located in the Cornelius Connelly Survey, A-319, Tarrant County, Texas. Said tract being a portion of Carswell Air Force Base previously surveyed by T.D. Disheroon in October of 1976 and revised in October of 1978 of which survey is filed with the Corp of Engineers, Fort Worth Division, said tract also being a portion of the NAS Fort Worth JRB Overall Area per plat of survey called boundary resurvey of a tract known as NAS Fort Worth JRB (AKA Carswell Air Force Base) Tarrant County, Texas prepared by Baird, Hampton & Brown, Inc., Fort Worth, Texas, dated January 14, 1998 and filed with the Air Force Base Conversion Agency and Westworth Redevelopment Authority, said tract being more particularly described by metes and bounds as follows:

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THENCE South 00 degrees 34 minutes 13 seconds East, a distance of 502.79 feet to a found 5/8 inch iron rod;

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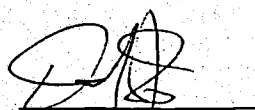
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THENCE North 42 degrees 58 minutes 15 seconds East, a distance of 91.73 feet to a set 5/8 inch capped iron rod (BHB INC);

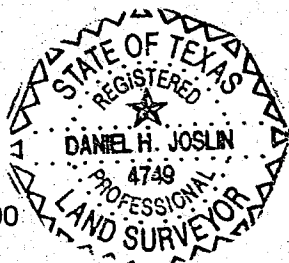
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Reference bearing basis per USCGS Monument ELEC and USCGS Monument RUN using NAD 83 datum.



Daniel H. Joslin
R.P.L.S. No. 4749

Dated: August 16, 2000

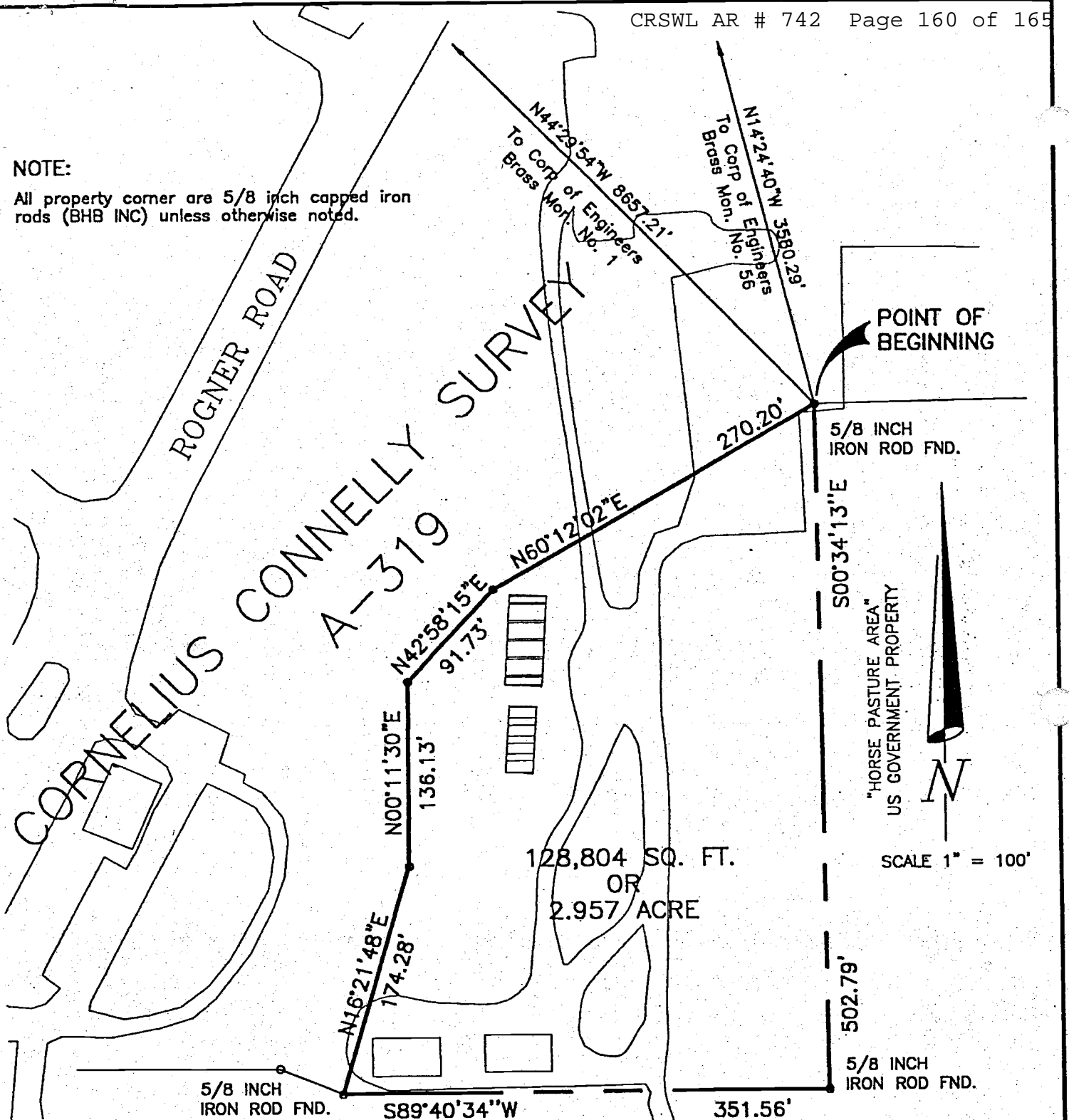


TRUE AND CORRECT COPY OF
ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK

BY  Deputy

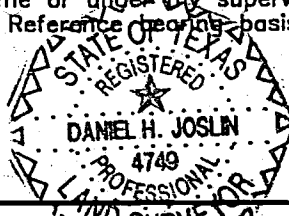
NOTE:

All property corner are 5/8 inch capped iron rods (BHB INC) unless otherwise noted.



I, Daniel H. Joslin, a Registered Professional Land Surveyor, of the State of Texas, do hereby state to the best of my knowledge and belief that the above survey is an accurate delineation of field survey and office computations performed by me or under my supervision, and that all property corners shall be marked on the ground as indicated. Reference is made on this basis per USCGS monuments ELEG and RUN using CONAD83 data.

Daniel H. Joslin
R.P.L.S. No. 4749
Dated: August 16, 2000.



ORIGINAL RECORD FILED IN
TARRANT COUNTY, TEXAS:
SUZANNE HENDERSON, COUNTY CLERK

BY Deputy



Baird, Hampton & Brown, Inc.
Engineering & Surveying

309 W. 7th St., Ste. 500 Ft. Worth, TX 76102 Tel:(817)338-1277 Fax:(817)338-9245 E-Mail:mail@bhbinc.com

DRAWN BY:	dhj
CHECKED BY:	bhb
BHB PROJECT:	2000.006.023
DATE:	August 16, 2000

Robert J. Huston, *Chairman*
R B. "Ralph" Marquez, *Commissioner*
John M Baker, *Commissioner*
Jeffrey A Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

May 8, 2001

Mr. Charles Pringle
Team Chief/BEC
HQ-AFCEE/ERB
3207 North Road, B-532
Brooks AFB, TX 78235-5363

Re: Closure/Remediation - Risk Reduction Standard No. 2
Acceptance of Deed Certification and Release From Post-closure Care Responsibilities
Carswell Air Force Base
TNRCC Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
Ground Maintenance Yard (AOC 05)

Dear Mr. Pringle:

The Texas Natural Resource Conservation Commission (TNRCC) received a letter dated April 3, 2001 submitted by the Air Force Base Conversion Agency (AFBCA) containing proof of deed certification for the Grounds Maintenance Yard. The certification states that contaminants remaining at the site have been remediated to meet non-residential (i.e. industrial/commercial) soil criteria under Risk Reduction Standard (RRS) No. 2 pursuant to Title 30 Texas Administrative Code (TAC) Chapter 335 Subchapters A and S.

In order to attain RRS No. 2, all industrial solid waste and municipal hazardous waste and waste residues must be removed or decontaminated to health based standards and criteria. Contaminants allowed to remain in place in media of concern (i.e., soil, ground water, surface water and air) must not exceed the health based clean up levels as specified in 30 TAC §335.556. A Final Report, documenting that remediation at the facility has attained RRS No. 2 such that no post-closure care or engineering control measures are required, was previously accepted by the TNRCC in our letter dated December 19, 2000.

After review of the proof of deed certification, it appears that the deed certification requirements of 30 TAC §335.560(b) and (c) have been completed. The TNRCC hereby releases AFBCA from post-closure care responsibilities associated with contamination for the Grounds Maintenance Yard.

If applicable, please submit a request in writing, to update your Notice of Registration (NOR) to the TNRCC Registration and Reporting Section at Mail Code MC-129 with a copy of this letter as an attachment.

Mr. Charles Pringle
Page 2
May 8, 2001

Please be aware that it is the continuing obligation of persons associated with a site to assure that municipal hazardous waste and industrial solid waste are managed in a manner which does not cause the discharge or imminent threat of discharge of waste into or adjacent to waters in the state, a nuisance, or the endangerment of the public health and welfare as required by 30 TAC §335.4. If the actual remediation fails to comply with these requirements, the burden remains upon (AFBCA) to take any necessary and authorized action to correct such conditions. A TNRCC field inspector may review your Final Report and conduct a closure inspection of the site.

Questions concerning this letter should be directed to me at (512) 239-2360. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TNRCC Region 4 Office in Arlington. The TNRCC Solid Waste Registration Number and Unit Name should be referenced in all submittals.

Sincerely,



Mark A. Weegar, Project Manager
Team II, Corrective Action Section
Remediation Division
Texas Natural Resource Conservation Commission

MW/mw

cc: Mr. Gary Miller, U.S. EPA Region 6, Dallas, TX.(6PD-NB)
Mr. Tim Sewell, TNRCC Region 4 - Arlington (MC-R4)

APPENDIX D
SITE INSPECTION CHECKLIST

Five-Year Review Site Inspection Checklist
Former Carswell Air Force Base

Inspector: M. Rochford (HGL)/ A. Linder (BAH)

Date of Inspection: 10/18/2005

General Site Conditions

Site	Condition
SWMU 22 (Landfill 4)	Additional fill on top of cap placed by golf course
SWMU 23 (Landfill 5)	No deficiencies in cap noted
SWMU 24 (WP-07)	Grass covered area
SWMU 25 (Landfill 8)	Grass covered area
SWMU 59, 60, 65 (WSA)	Fenced
AOC 5 (Grounds Maintenance Yard)	Fenced but gate open. Area used for storage of construction materials. No drums noted.

Access and ICs

Site	Notes
SWMU 22 (Landfill 4)	No construction activity or drinking water wells noted
SWMU 23 (Landfill 5)	No construction activity or drinking water wells noted
SWMU 24 (WP-07)	No construction activity or drinking water wells noted
SWMU 25 (Landfill 8)	No construction activity or drinking water wells noted
SWMU 59, 60, 65 (WSA)	No construction activity noted. Gate intact and locked. Former power poles downed across perimeter road on north side of site inhibiting vehicle access. Phone number for contact was out of date, although alternate phone number provided was accurate. No drinking water wells noted.
AOC 5 (Grounds Maintenance Yard)	Construction activity pertaining to storage of materials only. No drinking water wells noted

Protectiveness

Site	Notes
SWMU 22 (Landfill 4)	Remedy protective
SWMU 23 (Landfill 5)	Remedy protective
SWMU 24 (WP-07)	Remedy protective
SWMU 25 (Landfill 8)	Remedy protective
SWMU 59, 60, 65 (WSA)	Remedy protective
AOC 5 (Grounds Maintenance Yard)	Remedy protective

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE